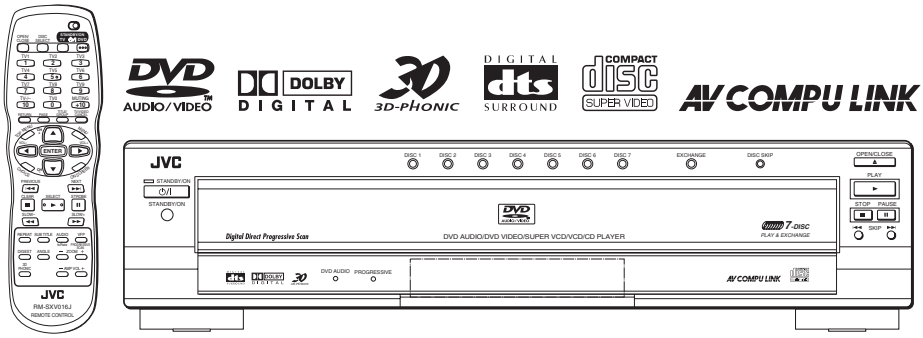
JVC

SERVICE MANUAL

DVD AUDIO/VIDEO PLAYER

XV-FA900BK/XV-FA902SL

Area Suffix	
J	---------- U.S.A.



Each difference point

Model	Body color
XV-FA900BK	Black
XV-FA902SL	Silver

< ATTENTION ! >
Please pull out the AC plug code after the standby indicator lights pushing the power supply button without fail after completing the repair.
The mechanism becomes initialed position. There is a possibility to break when carrying in not initialed position the mechanism but the state.

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SECTION 1
Important Safety Precautions

1.1 Safety Precautions

(1) This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.

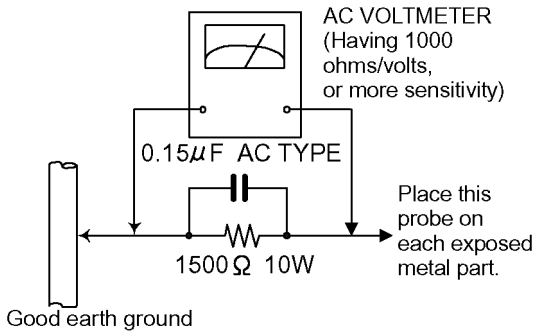
(2) Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturers warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.

(3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.

(4) The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.

(5) Leakage shock hazard testing)
After reassembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
- Alternate check method
  Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 ohm 10W resistor paralleled by a 0.15 µF AC-type capacitor between an exposed metal part and a known good earth ground.
  Measure the AC voltage across the resistor with the AC voltmeter.
  Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



1.2 Warning

(1) This equipment has been designed and manufactured to meet international safety standards.

(2) It is the legal responsibility of the repairer to ensure that these safety standards are maintained.

(3) Repairs must be made in accordance with the relevant safety standards.

(4) It is essential that safety critical components are replaced by approved parts.

(5) If mains voltage selector is provided, check setting for local voltage.

1.3 Caution

Burrs formed during molding may be left over on some parts of the chassis.
Therefore, pay attention to such burrs in the case of preforming repair of this system.

1.4 Critical parts for safety

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▮) and ICP (⬬) or identified by the "⚠" mark nearby are critical for safety.
When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the JC version)

1.5 Preventing static electricity

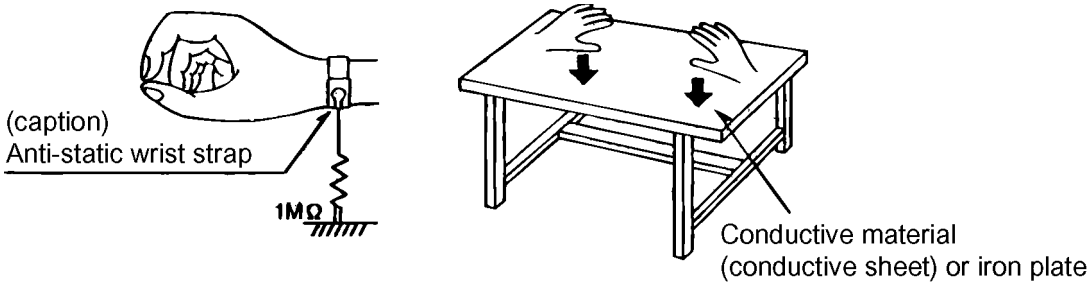
Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

1.5.1 Grounding to prevent damage by static electricity

Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as DVD players.
Be careful to use proper grounding in the area where repairs are being performed.

(1) Ground the workbench
Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

(2) Ground yourself
Use an anti-static wrist strap to release any static electricity built up in your body.



(3) Handling the optical pickup
- In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition.
(Refer to the text.)
- Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

1.6 Handling the traverse unit (optical pickup)

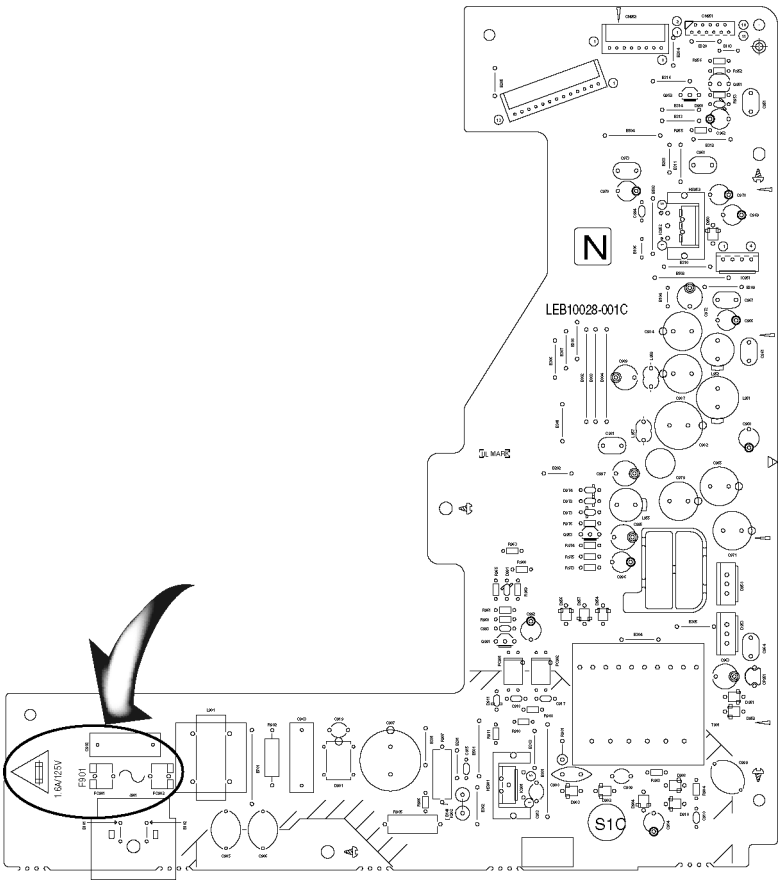
(1) Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.

(2) Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.

(3) Handle the flexible cable carefully as it may break when subjected to strong force.

(4)I t is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it.

1.7 Importance admistering point on the safety



Full Fuse Replacement Marking	Marquage Pour Le Remplacement Complet De Fusible
Graphic symbol mark (This symbol means fast blow type fuse.) should be read as follows ;	Le symbole graphique (Ce symbole signifie fusible de type á fusion rapide.) doit être interprété comme suit ;
FUSE CAUTION	**PRECAUTIONS SUR LES FUSIBLES**
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSES ; **F901 : 1.6 A / 125 V**	**POUR UNE PROTECTION CONTINUE CONTRE DES RISQUES D'INCENDIE, REMPLACER SEULEMENT PAR UN FUSIBLE DU MEME TYPE ;** **F901 : 1.6 A / 125 V**

1.8 Precautions for Service

1.8.1 Handling of Traverse Unit and Laser Pickup

(1) Do not touch any peripheral element of the pickup or the actuator.

(2) The traverse unit and the pickup are precision devices and therefore must not be subjected to strong shock.

(3) Do not use a tester to examine the laser diode. (The diode can easily be destroyed by the internal power supply of the tester.)

(4) To replace the traverse unit, pull out the metal short pin for protection from charging.

(5) When replacing the pickup, after mounting a new pickup, remove the solder on the short land which is provided at the center of the flexible wire to open the circuit.

(6) Half-fixed resistors for laser power adjustment are adjusted in pairs at shipment to match the characteristics of the optical block. Do not change the setting of these half-fixed resistors for laser power adjustment.

1.8.2 Destruction of Traverse Unit and Laser Pickup by Static Electricity

Laser diodes are easily destroyed by static electricity charged on clothing or the human body. Before repairing peripheral elements of the traverse unit or pickup, be sure to take the following electrostatic protection:

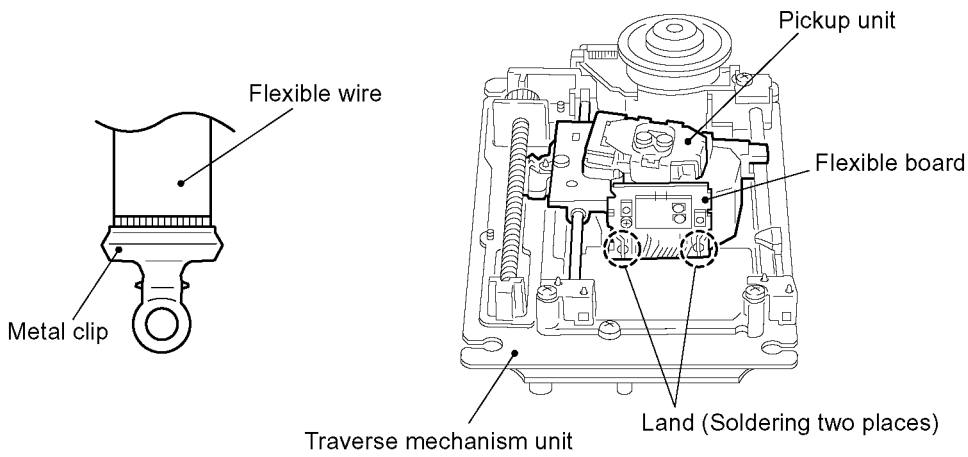
(1) Wear an antistatic wrist wrap.

(2) With a conductive sheet or a steel plate on the workbench on which the traverse unit or the pick up is to be repaired, ground the sheet or the plate.

(3) After removing the flexible wire from the connector (CN1), short-circuit the flexible wire by the metal clip.

(4) Short-circuit the laser diode by soldering the land which is provided at the center of the flexible wire for the pickup. After completing the repair, remove the solder to open the circuit.

Please refer to "Fig.1 of 3.2" of "Disassembly method" for details.



SECTION 2
Disassembly method

2.1 Main body

2.1.1 Removing the top cover (See Fig.1)

(1) Remove the four screws **A** on each side of the body.
(2) Remove the two screws **B** on the back of the body.
(3) Lift the rear part of the top cover and remove in the direction of the arrow while pulling both sides of the top cover outward.

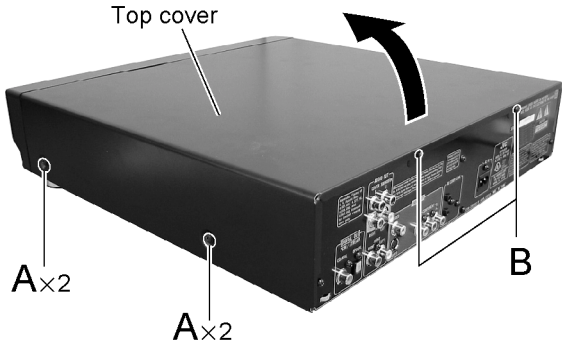


Fig.1

2.1.2 Removing the front panel assembly (See Fig.2 and 3)

• Prior to performing the following procedure, remove the top cover.
(1) Disconnect the card wire from connector CN801 and CN803 on the servo control board, and CN951 on the power board respectively.
(2) Remove the three screws **C** on the upper side of the body.
(3) Remove the three screws **D** on the bottom of the body. Remove the front panel assembly toward the front.

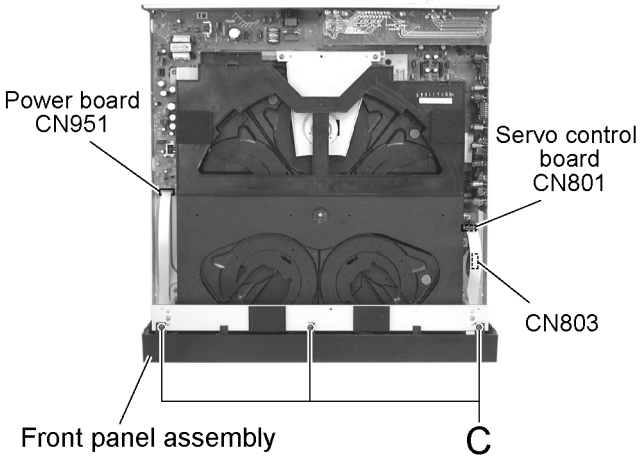


Fig.2

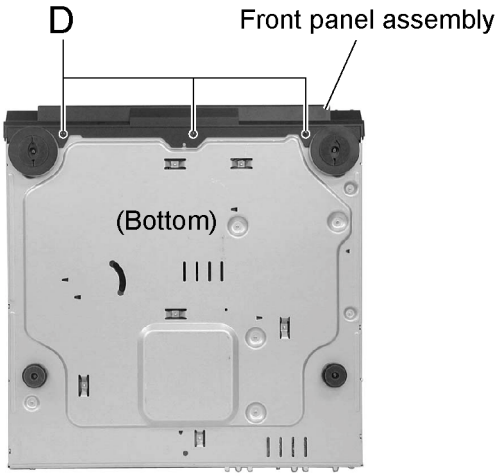


Fig.3

2.1.3 Removing the main tray assembly (See Fig.4 to 7)

- Prior to performing the following procedure, remove the top cover and the front panel assembly.
  (1) Turn over the body and insert a screwdriver into the slot of the bottom chassis, then move it in the direction of the arrow in Fig.4. The main tray assembly will move forward.
  (2) Draw the main tray assembly toward the front manually.
  (3) Bring up the joint **a** over the boss of the chassis, and remove the main tray assembly toward the front.
  (4) Remove the two screws **W** attaching the front bracket.
  (5) Disconnect the card wire, on the back of the main tray assembly, from connector CN841 on the relay board 1.

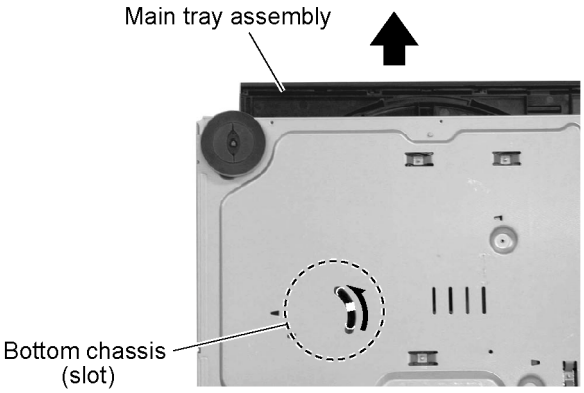


Fig.4

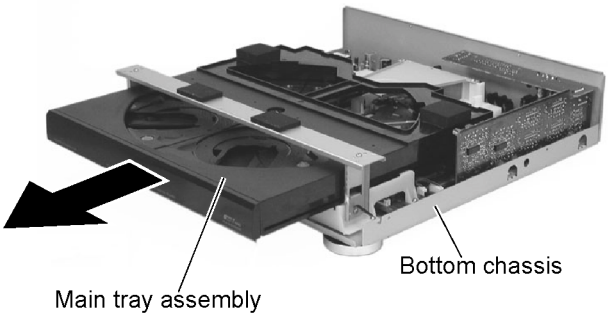


Fig.5

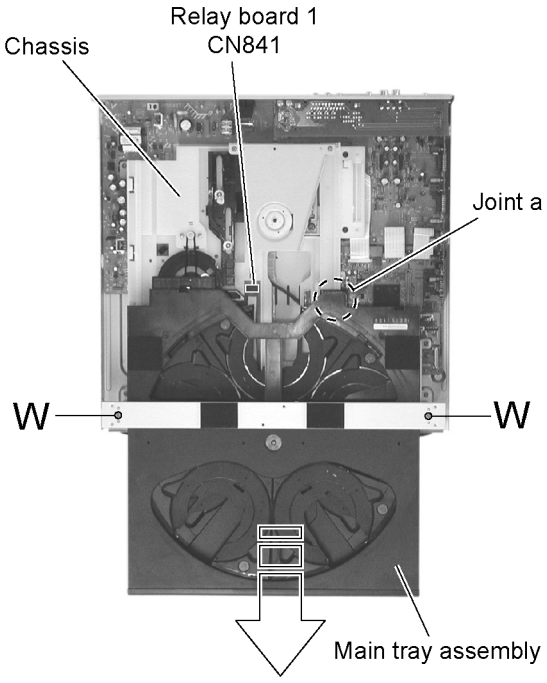


Fig.6

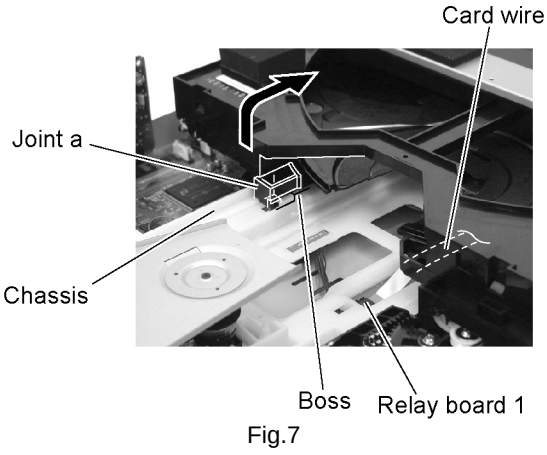


Fig.7

--Reattaching the main tray assembly --
(See Fig.8 to 10)

(1) Turn over the main tray assembly and pass the card wire extending from the photo sensor board through the notch **b**, in advance (Fig.8).
(2) From above the chassis, turn the load base counter-clockwise until the TM U/D cam stops at the back end (Bring down the traverse mechanism assembly).
(3) Reattach the main tray assembly to the chassis while fitting to the groove on the right and left sides of the chassis.
(4) Connect the card wire through the notch **b** to connector CN841 on the relay board 1.
(5) Reattach the main tray assembly while fitting the slot **c** to the shaft.

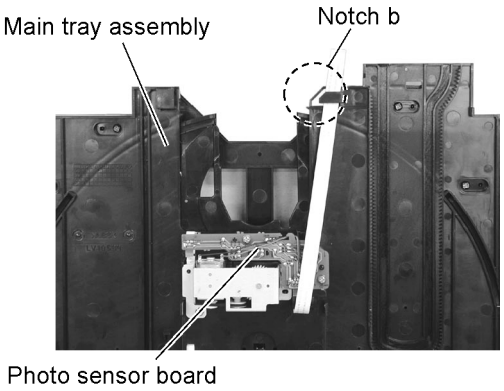


Fig.8

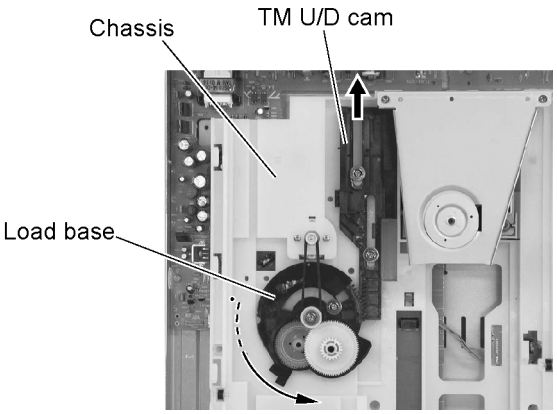


Fig.9

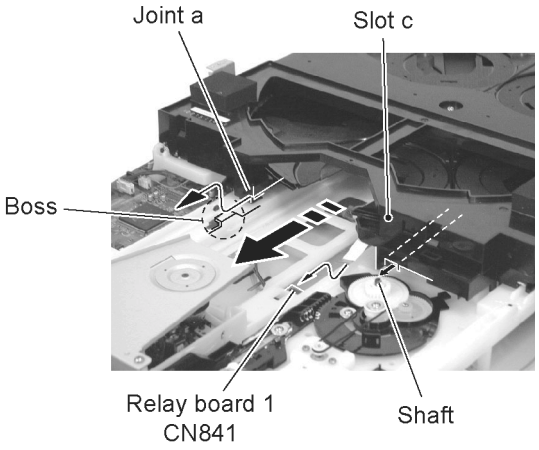


Fig.10

2.1.4 Removing the chassis
(See Fig.11)

- Prior to performing the following procedure, remove the top cover, the front panel assembly and the main tray assembly.

(1) Disconnect the wire from connector CN808, CN809 and the card wire from CN11 on the servo control board respectively.
(2) Remove the seven screws **E** attaching the chassis.

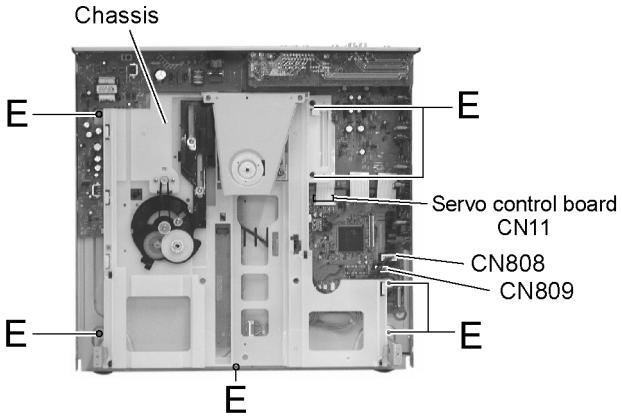


Fig.11

2.1.5 Removing the rear panel (See Fig.12)

- Prior to performing the following procedure, remove the top cover.
  (1) Remove the fourteen screws **F** attaching the rear panel.

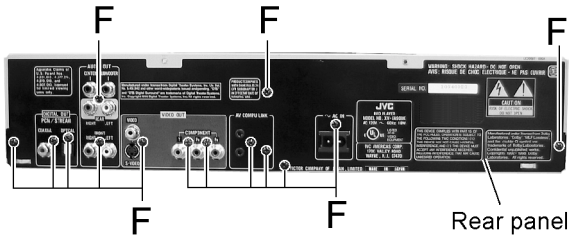


Fig.12

2.1.6 Removing each board (See Fig.13 to 15)

- Prior to performing the following procedure, remove the top cover, the front panel assembly, the main tray assembly, rear panel and the chassis.

--Surround audio board--

(1) Pull out the surround audio terminal board from connector CN763.
(2) Remove the screw **G** attaching the surround audio board.
(3) Pull out the surround audio board from connector CN754 and CN603.

--Servo control board--

(1) Disconnect the card wire from connector CN601 and CN602 on the servo control board.
(2) Disconnect the wire from connector CN807, CN810 and CN901 on the servo control board respectively.
(3) Remove the screw **H** attaching the servo control board and release the joint **a**.

--Relay board 1--

(1) Disconnect the wire from connector CN842 on the relay board 1.
(2) Remove the two screws **I** attaching the relay board.

--A/V output board--

(1) Disconnect the card wire from connector CN751 and CN752 on the A/V output board.
(2) Remove the four screws **J** attaching the A/V output board.

--Power board--

(1) Disconnect the wire from connector CN952 and CN953 on the power board.
(2) Remove the four screws **K** on the upper side of the body.

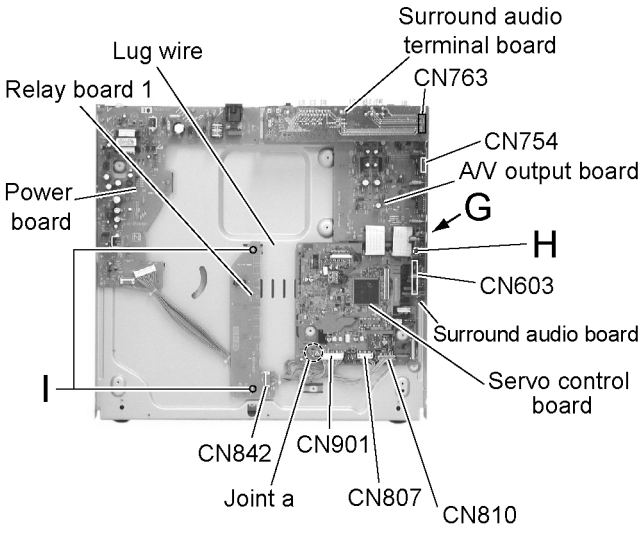


Fig.13

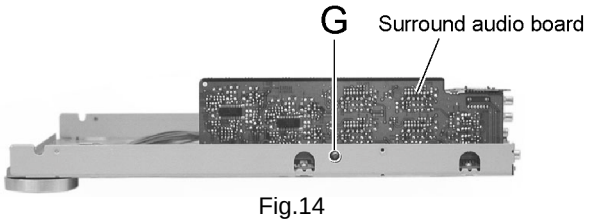


Fig.14

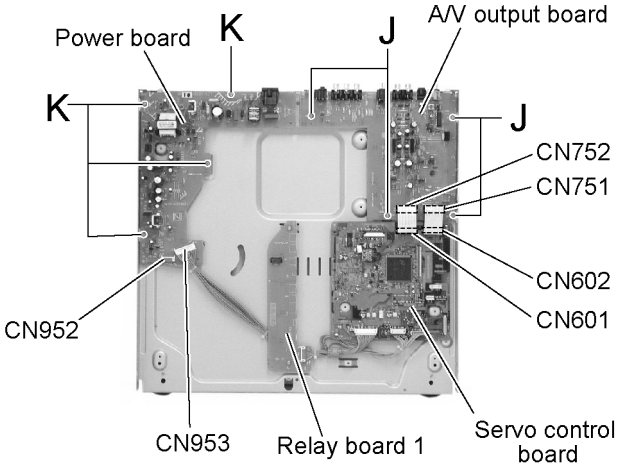


Fig.15

2.1.7 Removing the traverse mechanism assembly (See Fig.16 and 17)

• Prior to performing the following procedure, remove the top cover.

REFERENCE:

There is no need to remove the chassis.

(1) Eject the main tray assembly toward the front referring to "Removing the main tray assembly"
(2) Remove the two screws **L** and pull out the clamper base assembly upward.
(3) Disconnect the card wire from connector CN11 on the servo control board.
(4) Remove the four screws **M** and the traverse mechanism assembly upward.

CAUTION:

When reattaching the traverse mechanism assembly, pass the card wire extending from the traverse mechanism assembly through the notch **d** of the TM U/D base.

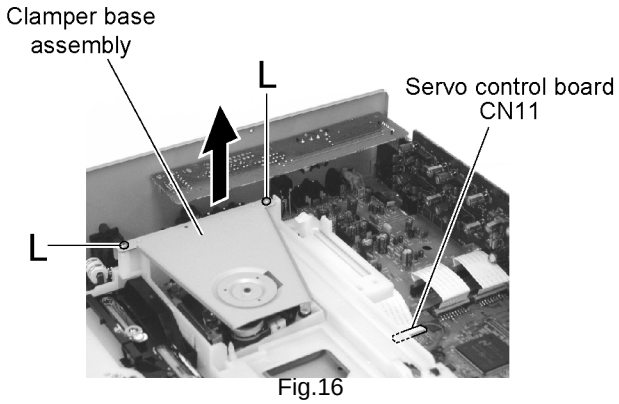


Fig.16

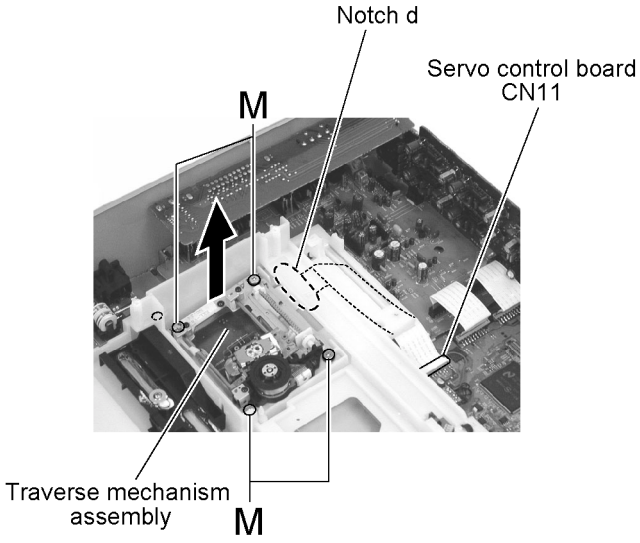


Fig.17

2.2 Front panel assembly

• Prior to performing the following procedure, remove the top cover and the front panel assembly.

2.2.1 Removing the power switch board (See Fig.18)

(1) Remove the two screws **N** on the back of the front panel assembly.
(2) Disconnect the card wire from connector CN813 and CN806 on the power switch board.

2.2.2 Removing the operation switch board (See Fig.18)

(1) Remove the seven screws **O** on the back of the front panel assembly.
(2) Disconnect the card wire from connector CN812 on the operation switch board.

2.2.3 Removing the FL display board (See Fig.18)

(1) Remove the two screws **P** on the back of the front panel assembly.
(2) Disconnect the card wire from connector CN805 on the FL display board.

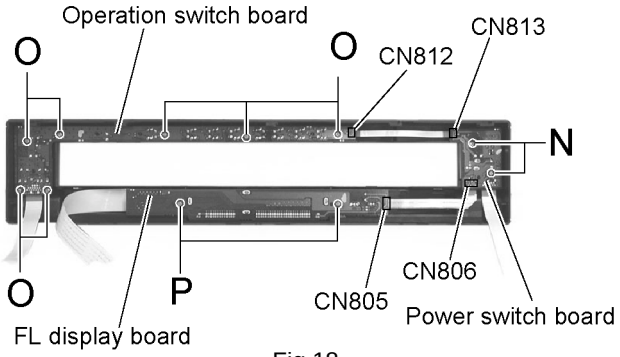


Fig.18

SECTION 3
MECHANISM

3.1 chassis unit

- Prior to performing the following procedures, remove the top cover, the front panel assembly, the main tray assembly, the chassis.

3.1.1 Removing the TM U/D base (See Fig.1 and 2)

REFERENCE:

It is not necessary to remove the traverse mechanism assembly from the TM U/D base. As the removing procedure of the traverse mechanism, please refer to “Removing the traverse mechanism assembly”

(1) Turn over the chassis and remove the two screws **Q**.
(2) Remove the TM U/D base upward.

Reattaching the TM U/D base

REFERENCE:

From above the loading base, turn the load base counterclockwise until the TM U/D cam stops at the back end as shown in
Fig.2.

(1) Reattach the TM U/D base to the chassis while fitting the two Bosses on the side of the TM U/D base to the grooves of the TM U/D cam.
(2) Reattach the two screws **Q**.

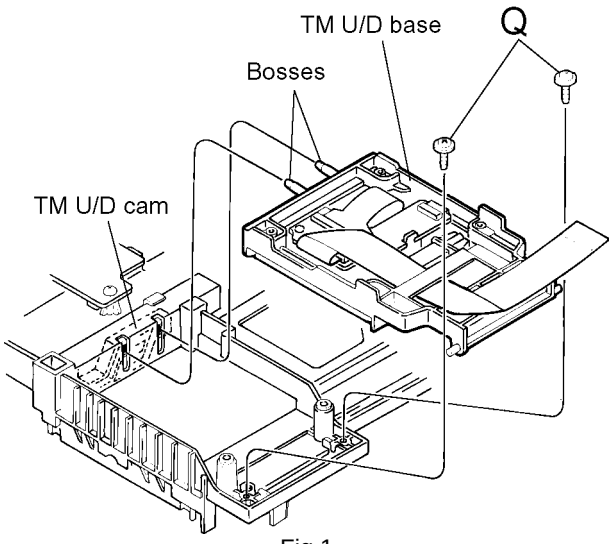


Fig.1

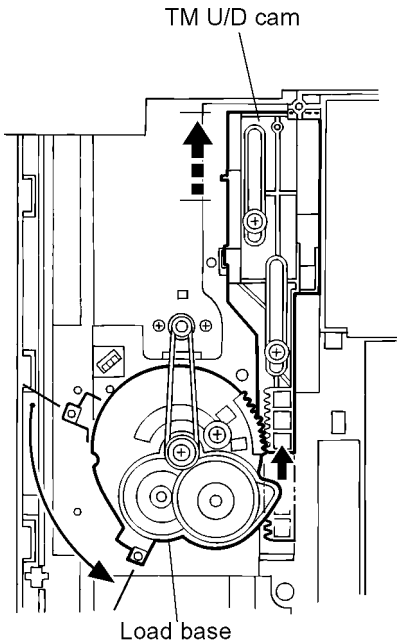


Fig.2

3.1.2 Removing the load belt / load base / TM U/D cam (See Fig.3 to 6)

- Prior to performing the following procedures, remove the TM U/D base.
  (1) Remove the load belt on the upper side of the chassis.
  (2) Remove the screw **R** attaching the L. pulley gear.
  (3) Remove the L. pulley gear, the load gear (1), the load gear (2) and the load belt respectively.
  (4) Remove the screw **S** and the load base upward.
  (5) Remove the two screws **T** and the TM U/D cam upward.

CAUTION:
When reattaching the TM U/D cam and the load base,

(1) Move the TM U/D cam toward the front until it stops (Fig.6).
(2) Make sure that the part **d** of the load base is out of alignment with the switch **e** and that the gear **f** is disengaged from the TM U/D cam.

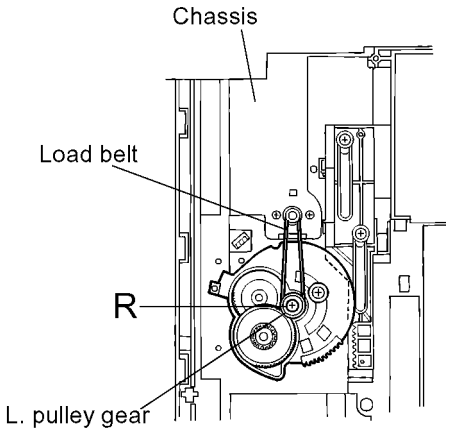


Fig.3

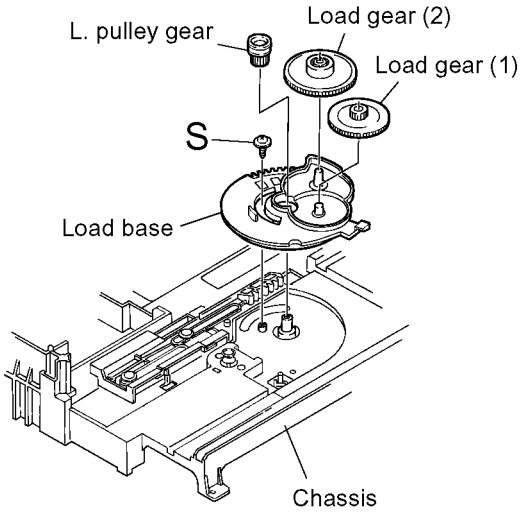


Fig.4

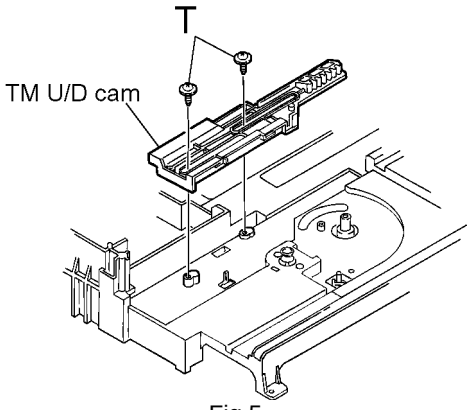


Fig.5

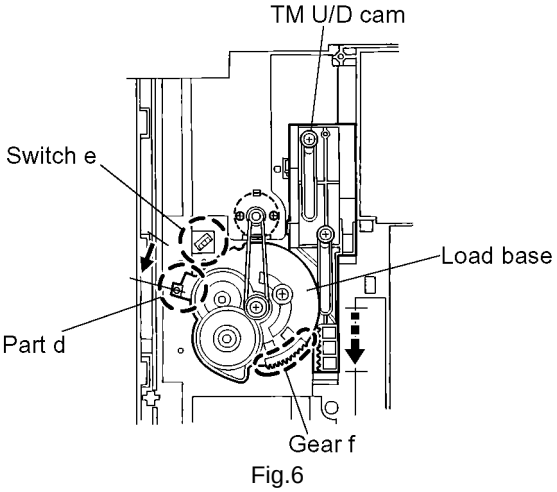


Fig.6

3.1.3 Removing the loading motor / loading motor board (See Fig.7 and 8)

(1) Remove the two screws **U** attaching the loading motor on the upper side of the chassis.
(2) Turn over the chassis and unsolder the two soldering **g** on the loading motor board.
(3) Remove the two screws **V** attaching the loading motor board.
(4) Spread apart the two tabs **h** and pull out the loading motor.

CAUTION:

When reattaching the loading motor board, settle the wires on the two hooks **i** on the chassis and draw the other end to the left as shown in Fig.9.

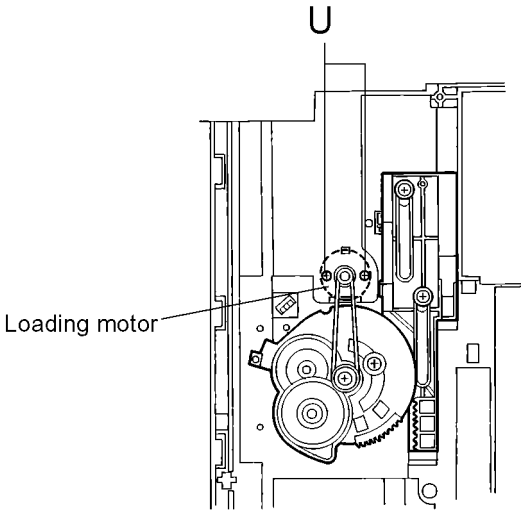


Fig.7

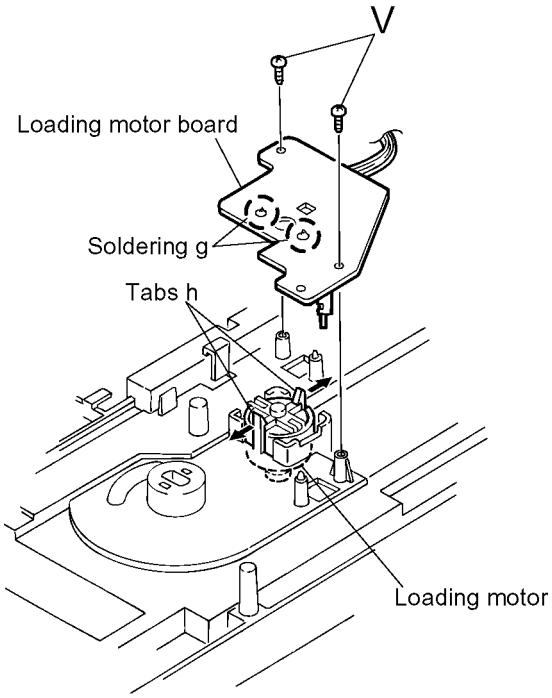


Fig.8

3.1.4 Removing the tray switch board (See Fig.9)

(1) Turn over the chassis, and remove the tray switch board while spreading apart the two tabs **j**.

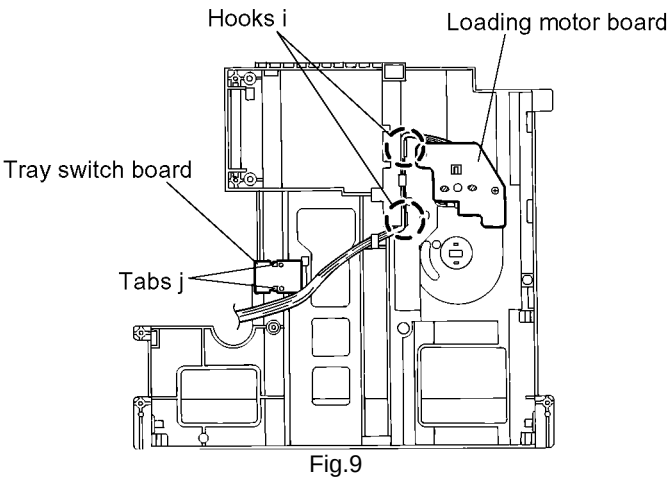


Fig.9

3.2 Traverse mechanism unit

3.2.1 Removing the pickup (See Fig.1 to 5)

It is not necessary to remove the traverse mechanism unit.

(1) Solder soldering **a** on the flexible board next to the pickup unit.
(2) From the bottom of the traverse mechanism unit, disconnect the flexible wire from CN1 on the pickup board.

ATTENTION:
Disconnecting the flexible wire without soldering may cause damage to the pickup.

(3) Remove the screw **A** attaching the shaft stopper (R) on the upper side of the traverse mechanism unit. Pull the side of the shaft stopper (R) outward to release the joint **b** and remove it upward. Remove the skew spring at the same time.
(4) Move the shaft in the direction of the arrow to release it from the part **c**.
(5) Release the joint **d** with the shaft and remove the pickup with the shaft.
(6) Pull out the shaft.
(7) Remove the screw **B** attaching the switch actuator.

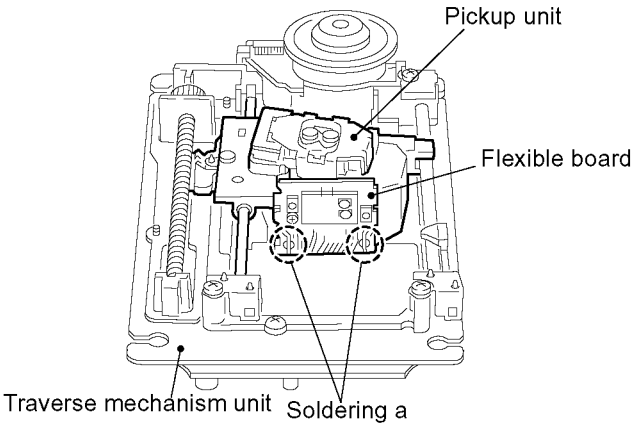


Fig.1

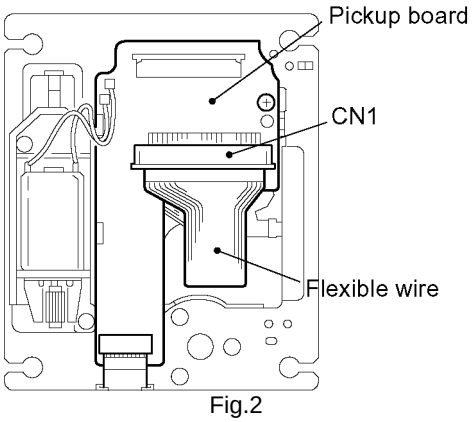


Fig.2

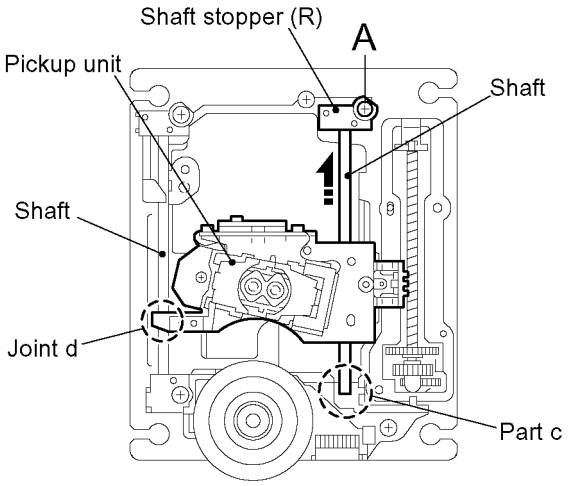


Fig.3

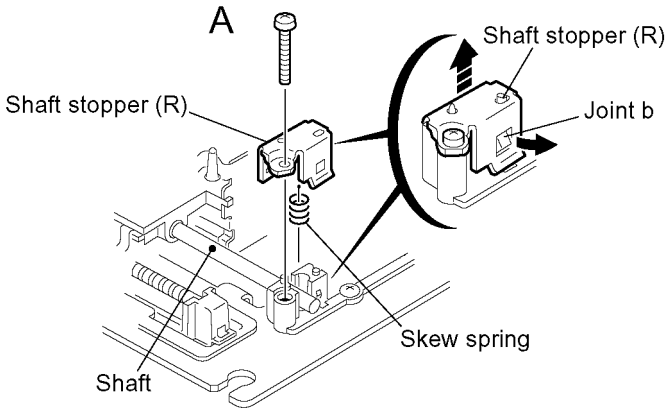


Fig.4

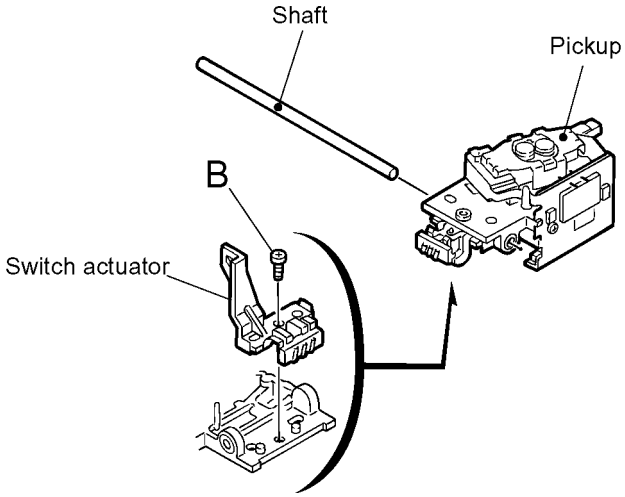


Fig.5

3.2.2 Removing the pickup board (See Fig.1 and 6)

It is not necessary to remove the traverse mechanism unit.

(1) Solder soldering **a** on the flexible board next to the pickup unit.

(2) From the bottom of the traverse mechanism unit, disconnect the flexible wire from CN1 on the pickup board.

ATTENTION:

Disconnecting the flexible wire without soldering may cause damage to the pickup.

(3) Disconnect the card wire from connector CN2 on the pickup board and unsolder the soldering **e** and **f** on the harnesses

(4) Remove the screw **C** attaching the pickup board and release the two joints **g**.

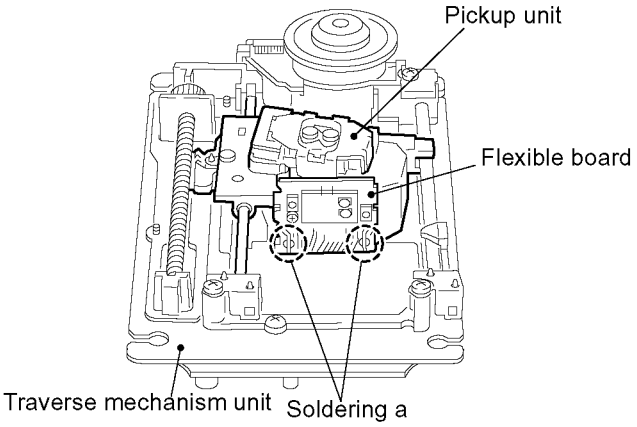


Fig.1

3.2.3 Removing the feed motor assembly (See Fig.1, 6 and 7)

• Prior to performing the following procedure, remove the traverse mechanism unit.

(1) Solder soldering **a** on the flexible board next to the pickup unit.

(2) From the bottom of the traverse mechanism unit, disconnect the flexible wire from CN1 on the pickup board.

ATTENTION:

Disconnecting the flexible wire without soldering may cause damage to the pickup.

(3) Remove the pickup board.

(4) Remove the two screws **D** attaching the feed motor assembly and remove the thrust spring. Move the feed motor assembly in the direction of the arrow to pull it out from the feed holder.

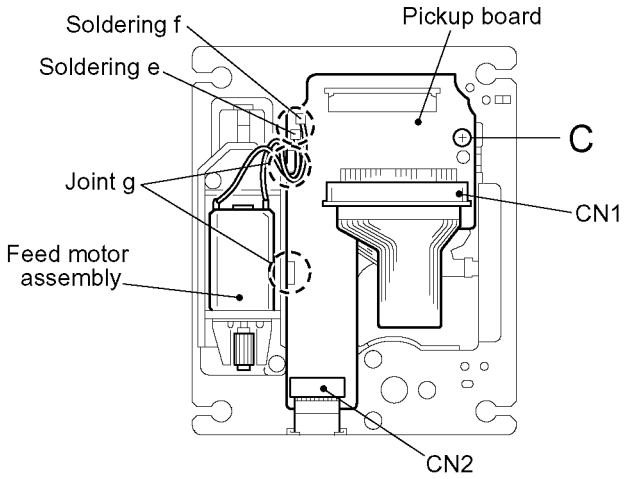


Fig.6

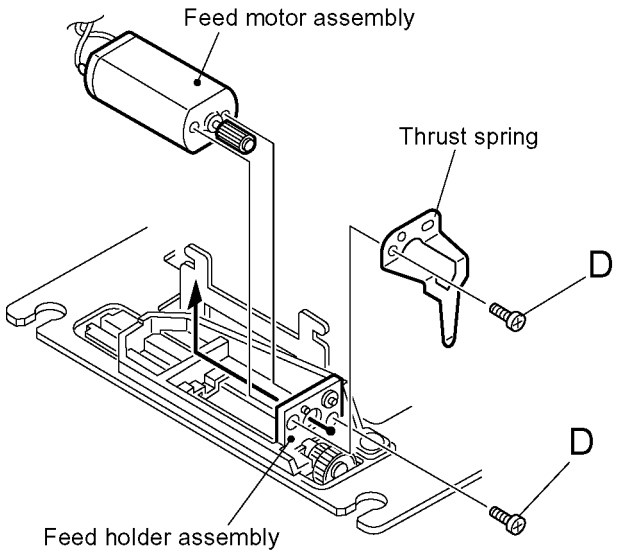


Fig.7

3.2.4 Removing the turn table assembly (See Fig.6, 8 and 9)

- Prior to performing the following procedure, remove the traverse mechanism unit.
  (1) Disconnect the card wire extending from the turn table assembly, from connector CN2 on the pickup board.
  (2) Remove the screw **E** attaching the shaft stopper (F) on the upper side of the traverse mechanism unit. Pull the side of the shaft stopper (F) outward to release the joint **h** and remove it upward. Remove the spring at the same time.
  (3) Remove the screw **F** attaching the turn table assembly.
  (4) Move the turn table assembly outward and pull out from the shaft. Then remove it from the base chassis.

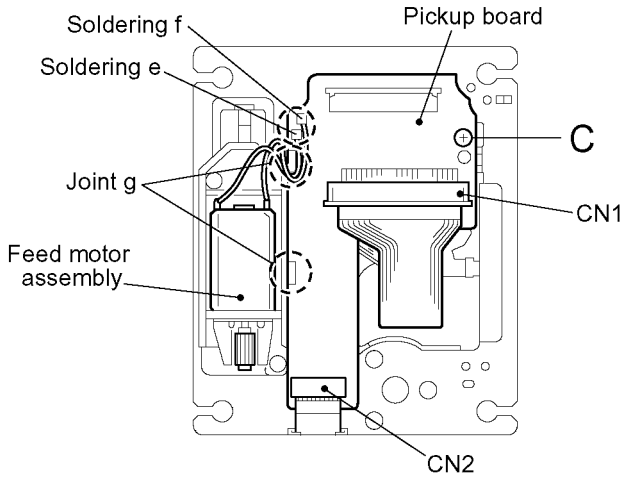


Fig.6

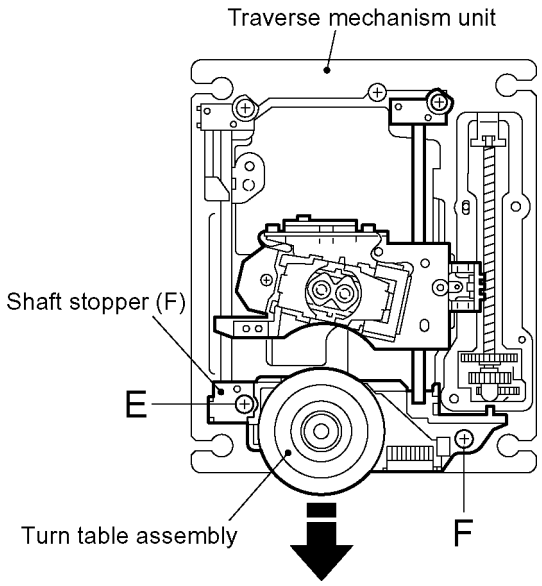


Fig.8

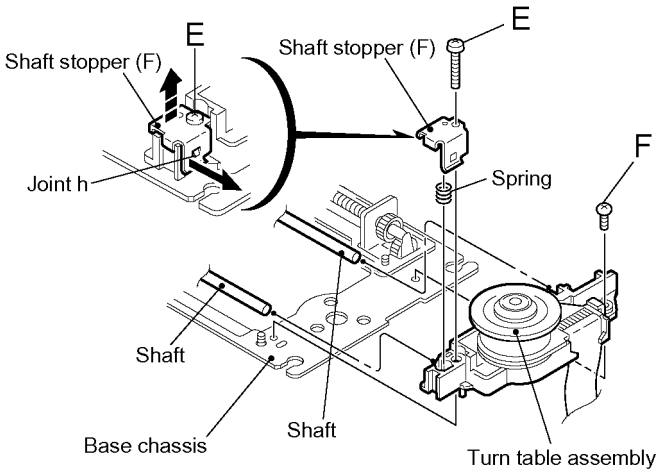


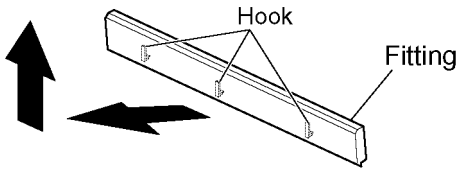
Fig.9

3.3 Main tray assembly unit

- Prior to performing the following procedures, remove the top cover, the front panel assembly and the main tray assembly.

3.3.1 Removing the fitting (See Fig.1)

(1) Remove the fitting on the front side of the main tray assembly while releasing the four joints **a** upward.



✱ Lifts for above while pulling the hook in three places to front side.

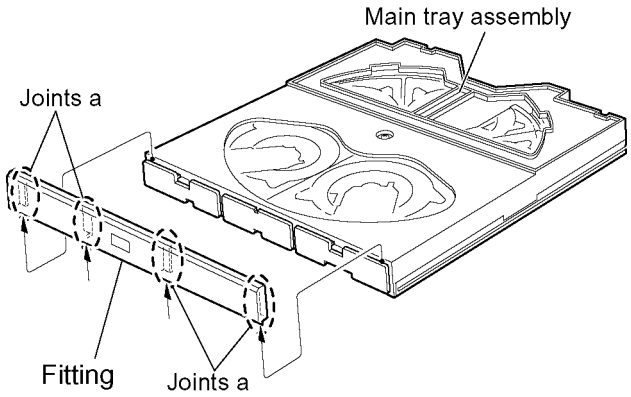


Fig.1

3.3.2 Removing the main tray cover and the main tray (See Fig.2 and 3)

- Prior to performing the following procedure, remove the fitting.

(1) Remove the six screws **A** attaching the main tray on the under side of the main tray assembly.
(2) Remove the screw **B** attaching the main tray cover on the upper side of the main tray assembly.
(3) Push the two joint tabs **b** on the back of the main tray assembly to release the main tray cover from the tray bottom. Disengage the joint tabs **c** of the main tray from the main tray cover.

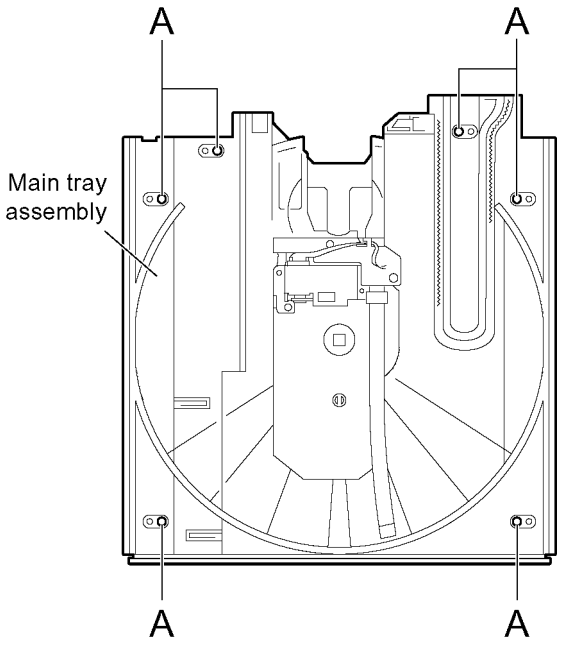


Fig.2

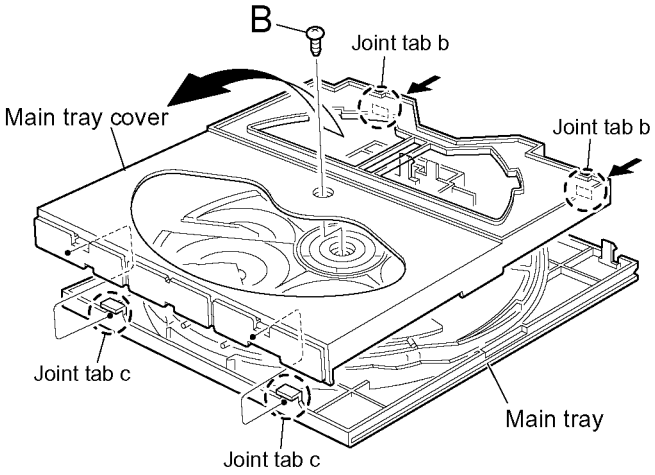


Fig.3

3.3.3 Removing the photo sensor board and the sub tray drive motor assembly (See Fig.4)

(1) Turn over the main tray assembly and remove the two screws **C** attaching the photo sensor board.

(2) Disconnect the card wire from connector CN082 on the photo sensor board.

REFERENCE:

Make sure to disconnect the card wire from the photo sensor board. If the photo sensor board is pulled out from the main tray without disconnecting the card wire, the cam switch side inside of the main tray may be damaged.

(3) Remove the two screws **D** attaching the motor base unit.

--When reassembling,--

- Attach the two wires to the part **d** on the photo sensor board, and before reattaching the photo sensor board, connect the card wire to connector CN082 and pass the card wire extending from connector CN081 through the notch **e** of the main tray.

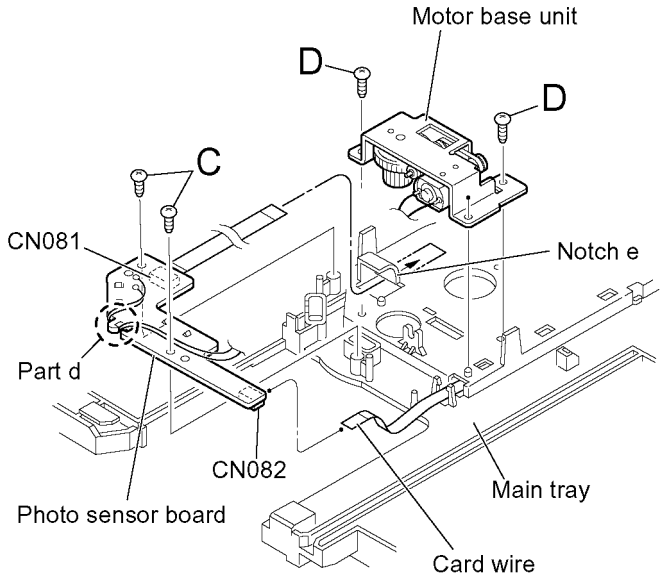


Fig.4

3.3.4 Sub tray position and operation check (See Fig.5 and 6)

- Prior to performing the following procedures, remove the fitting and the main tray cover.

CAUTION:

Make sure the sub trays are set as shown in Fig.5. When moving the sub trays, put the sub trays which come to the position (4) and (5) forward in turn.

Prior to moving the sub trays by hand, the sub tray drive motor assembly must be removed in advance referring to the preceding page.

Do not put the sub trays forward except at the position (4) and (5).

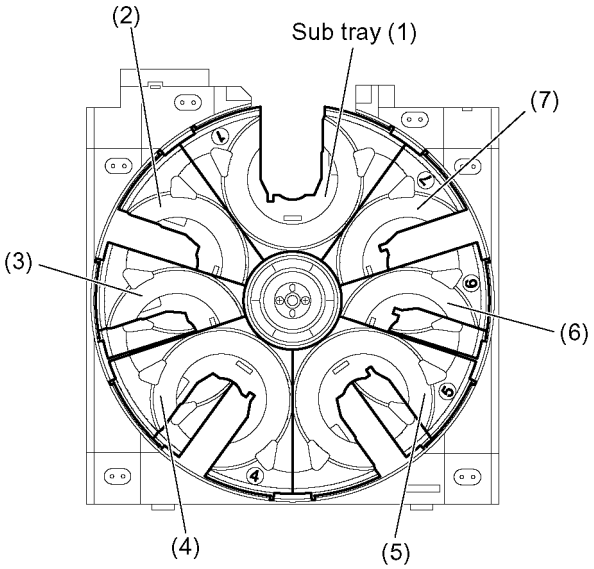


Fig.5

3.3.5 Removing the U/D cam (U) (See Fig.7)

- Prior to performing the following procedure, remove the main tray cover.

(1) Remove the two screws **E** attaching the U/D cam (U) on the upper side of the main tray assembly.

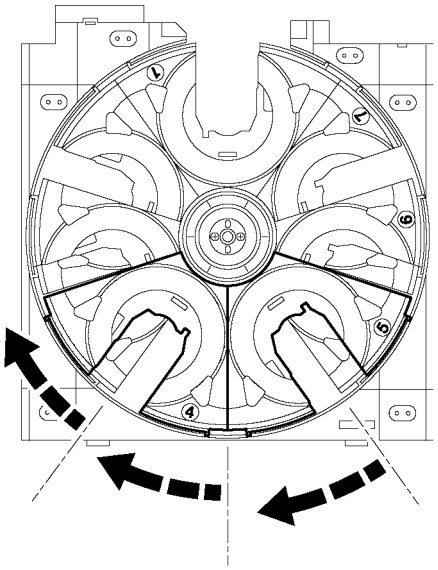


Fig.6

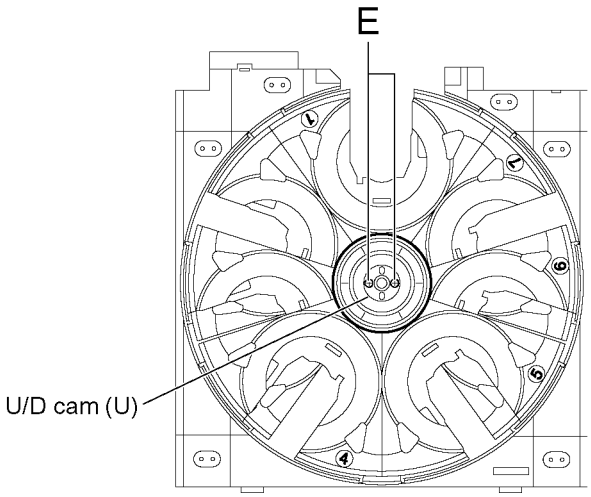


Fig.7

3.3.6 Removing the sub trays (See Fig.8 to 14)

- Prior to performing the following procedure, remove the main tray cover and the U/D cam (U).

CAUTION:

Remove the sub tray assembly (4), (3), (2), (5), (6), (7) and (1) in order. When reattaching, observe the following procedure without fail.

(1) Remove the sub tray (4) and (3) from the main tray upward.
(2) Remove the sub tray (2) upward.
(3) Similarly, remove the sub tray (5) , (6) and (7) upward.
(4) At last, remove the sub tray (1) upward.

--Reattaching the sub tray--

(1) Reattach the sub tray (1) while fitting the part **f** to the groove of the ACT. gear (1) marked **g**.
(2) Reattach the sub tray (2) while inserting the shaft **h** into the groove **i** of the main tray, and at the same time, fitting the part **j** to the groove of the ACT. gear (1) marked **k** .
Move the sub tray (2) toward the tray (1).
(3) Similarly, reattach the sub tray (7).

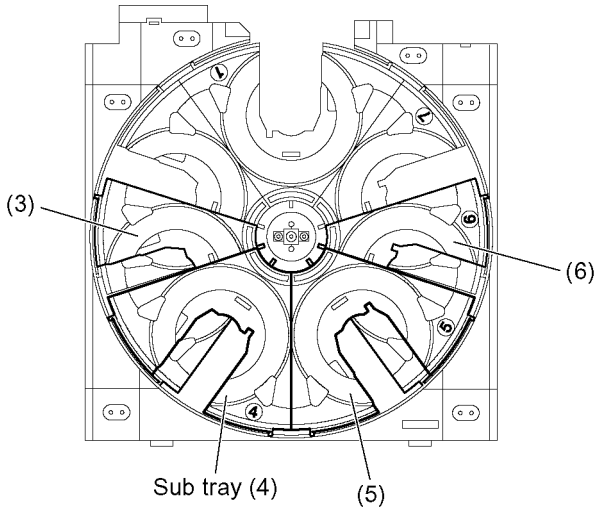


Fig.8

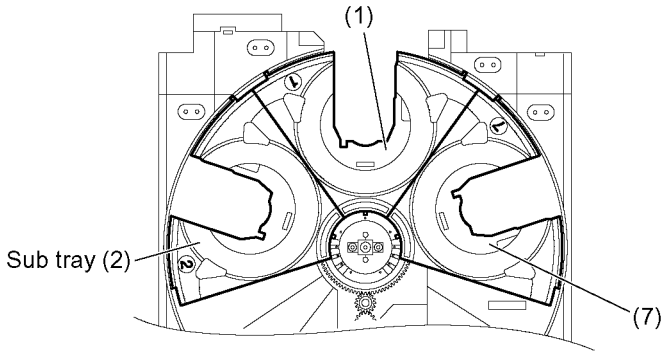


Fig.9

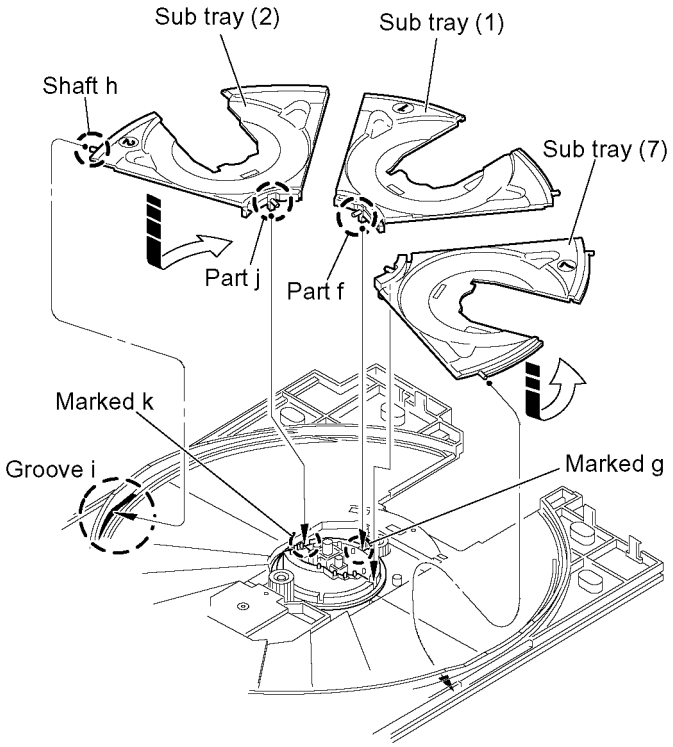


Fig.10

(4) Reattach the sub tray (3) while inserting the shaft **l** into the groove **m** of the main tray, and at the same time, putting the shaft **n** on the U/D cam (L). Then, move the sub tray (3) toward the sub tray (2) until it stops.

REFERENCE:

At this point, the sub tray (3) is on top of the sub tray (2).

(5) Reattach the sub tray (4) while fitting the part **o** to the ACT.gear (2) on the main tray.

CAUTION:

Make sure the part **o** of the sub tray (4) engages with the ACT. gear (2) correctly in the center of the main tray.

REFERENCE:

At this point, the sub tray (4) is on top of the sub tray (3).

(6) Reattach the sub tray (6) and (5) in the same way.

CAUTION:

Make sure that the trays are attached to the correct position and that they can be moved. To move the sub trays manually, the sub tray drive motor assembly must be removed in advance.

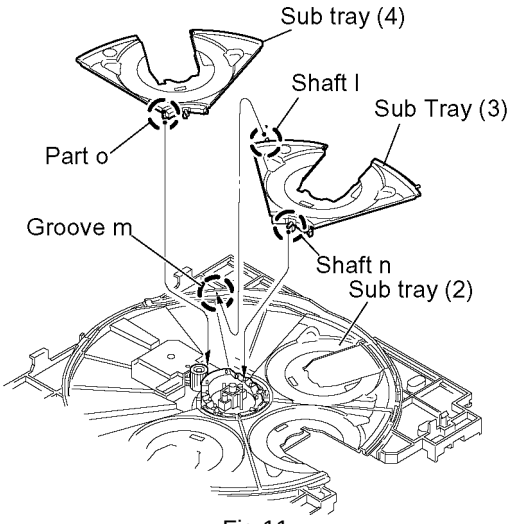


Fig.11

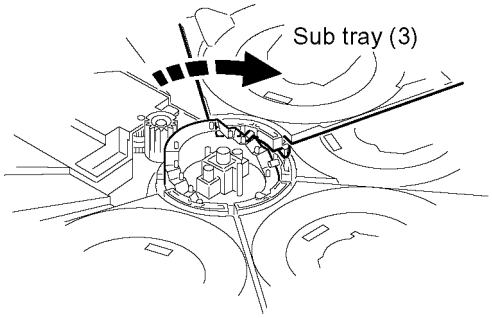


Fig.12

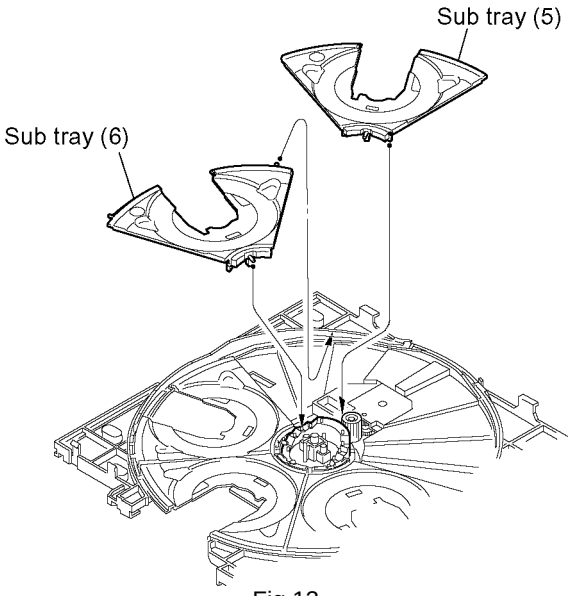


Fig.13

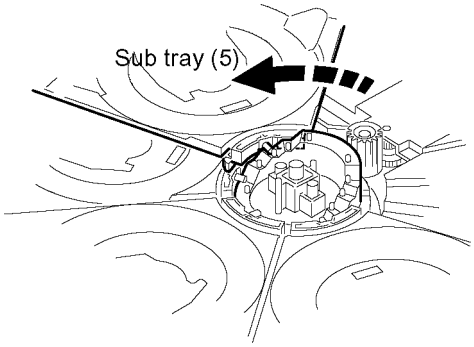


Fig.14

3.3.7 Removing the cam switch board assembly (See Fig.15 to 17)

- Prior to performing the following procedure, remove the main tray cover, the U/D cam (U) and the sub trays.
  (1) Remove the screw **F** attaching the gear cover. Release the two tabs marked **p** by pushing inward.
  (2) Remove the cam gear (2) upward.
  (3) Disconnect the card wire from connector CN083 on the cam switch board assembly.
  (4) Remove the two screws **G** attaching the cam switch board assembly.

CAUTION:

When reattaching the cam gear (2), set the position of the boss and the triangular mark and hole as shown in Fig.17.

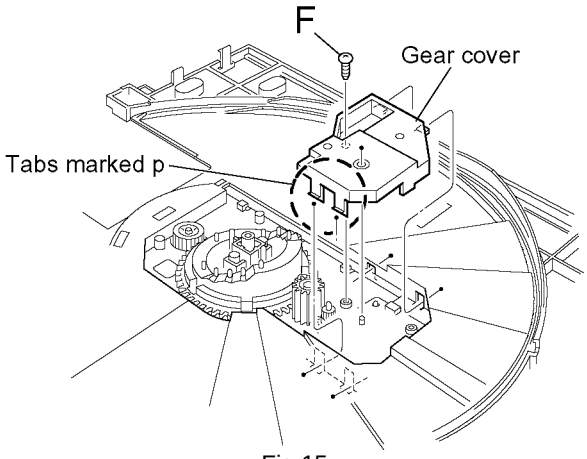


Fig.15

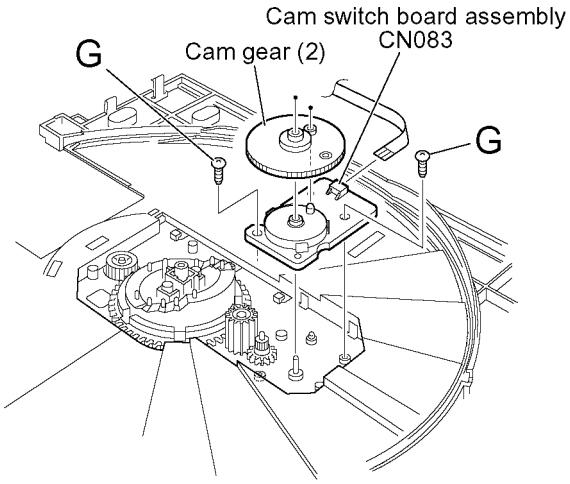


Fig.16

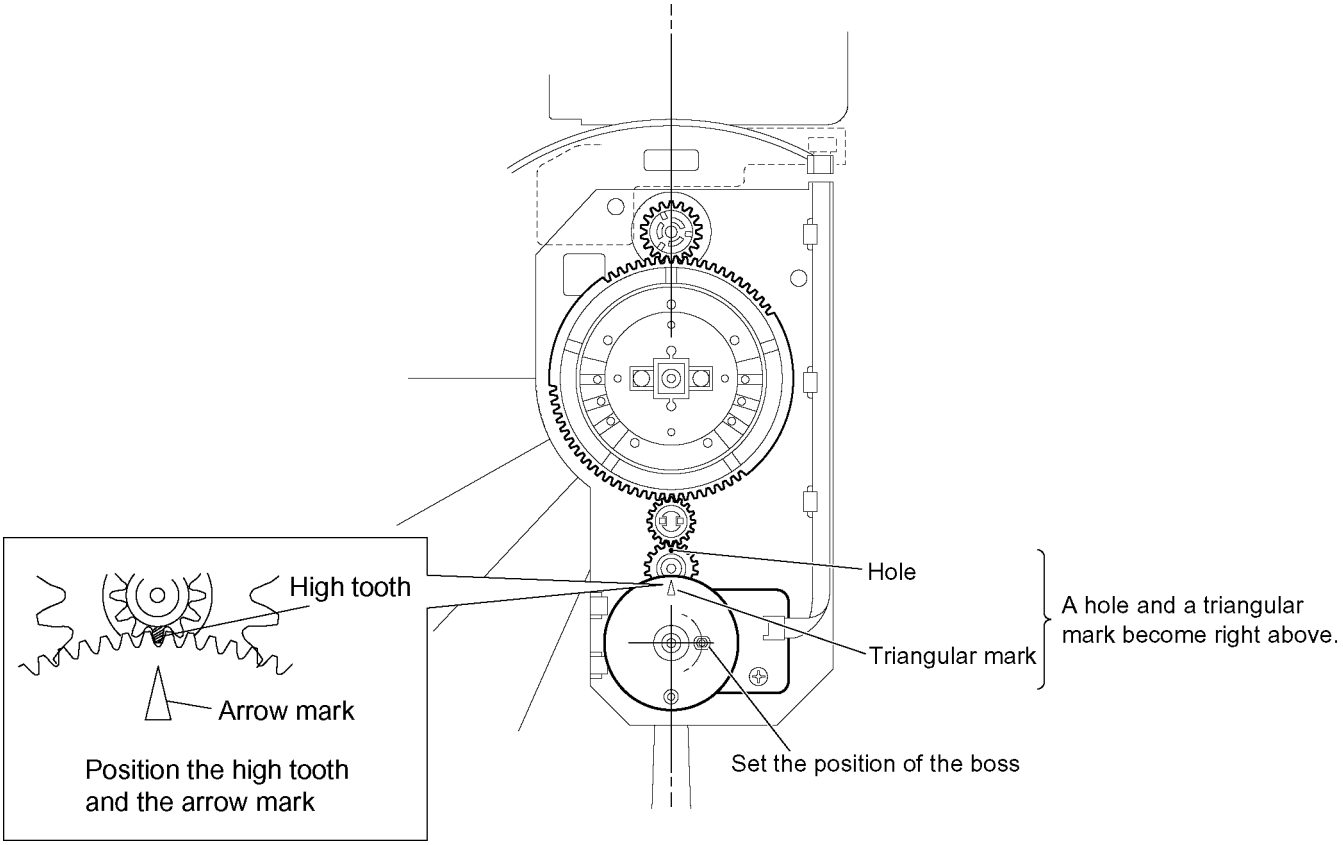

High tooth
Arrow mark
Position the high tooth and the arrow mark
Hole
Triangular mark
A hole and a triangular mark become right above.
Set the position of the boss

Fig.17

3.3.8 Removing the ACT. gear (1), U/D cam (L), cam gear (1) and ACT.gear (2) (See Fig.18 and 19)

- Prior to performing the following procedure, remove the main tray cover, the U/D cam (U) and the sub trays.
  (1) Draw out the U/D cam (L).
  (2) Draw out the ACT. gear (1).
  (3) Draw out the cam gear (1).
  (4) Draw out the ACT. gear (2) while pushing the two inward.

CAUTION:

When reassembling, make sure the position of each gear referring to Fig.19 and reattach the ACT. gear (2) first.

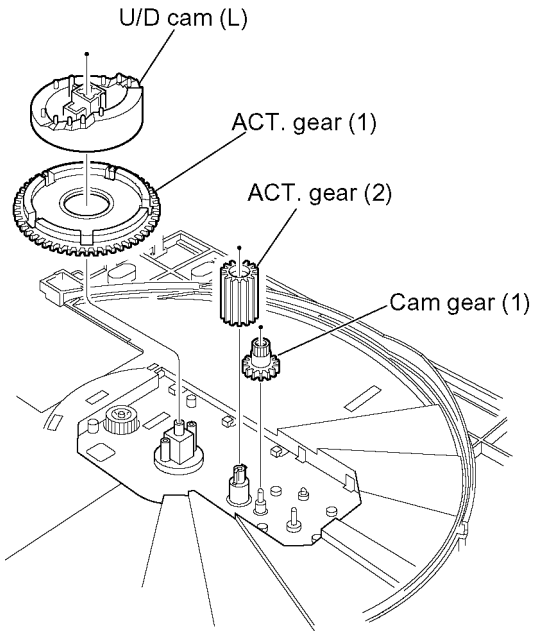


Fig.18

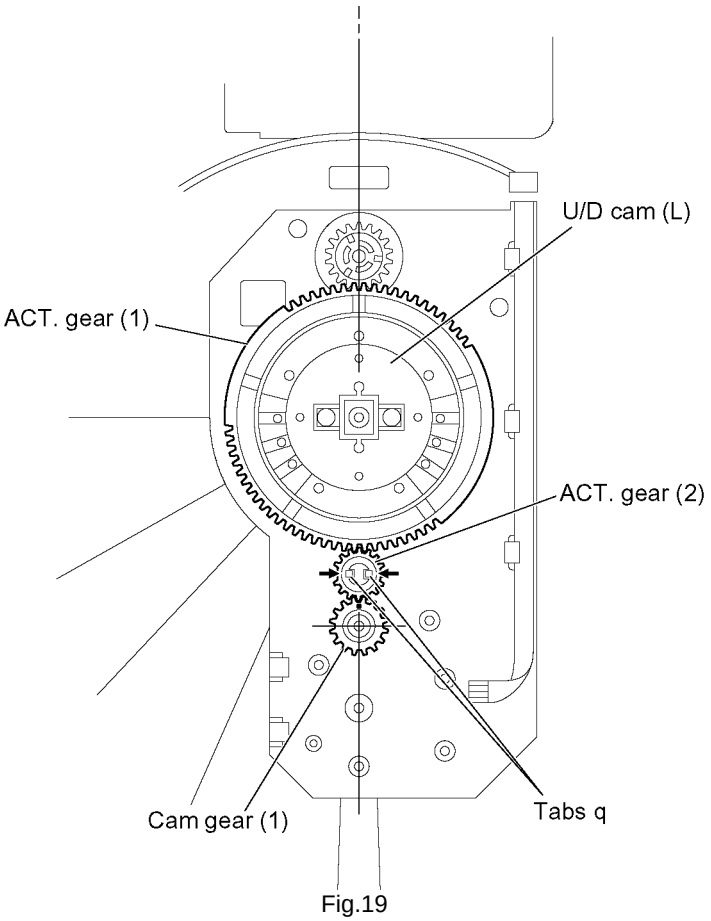
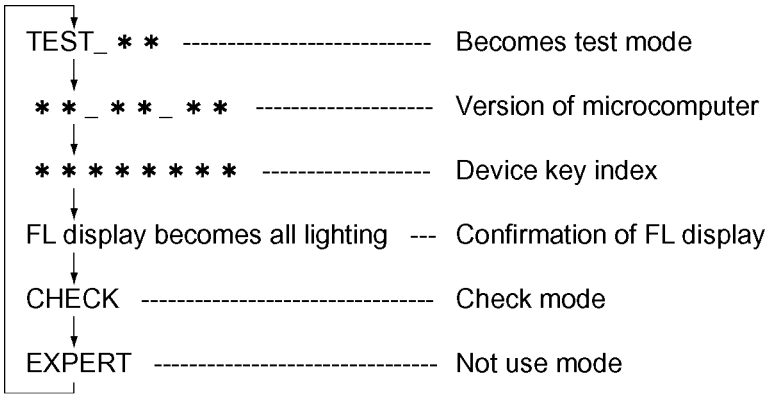


Fig.19

SECTION 4
Adjustment method

4.1 Test mode setting method

(1) Take out the disc and close the tray.
(2) Unplug the power plug.
(3) Insert power plug into outlet while pressing both "PLAY" button and "STOP" button of the main body.
(4) The player displays "TEST * * " on the FL display. keeps pushing the button until this is displayed.
" * * " means the player version.
(5) When the power supply is turned off, test mode is released.
The mode changes as follows whenever the "CHOICE" button of remote controller is pushed in test mode.



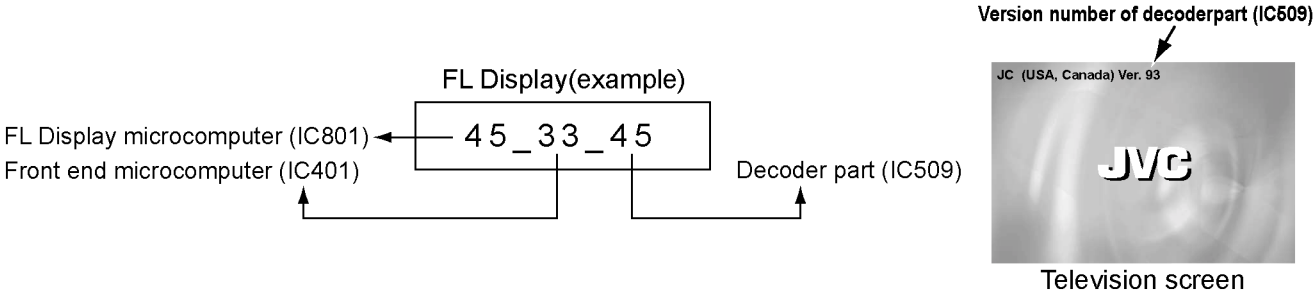
4.2 Initialization method

Please initialize according to the following procedures when microprocessor or pick-up is exchanged and when the upgrade is done.

(1) Makes to test mode.
(2) After "FORWARD SKIP" button (▶▶|) of the main body is pushed, "PAUSE" button is pushed.
(3) DVD AUDIO indicator lights when about ten seconds pass. Then, it is initialization completion.

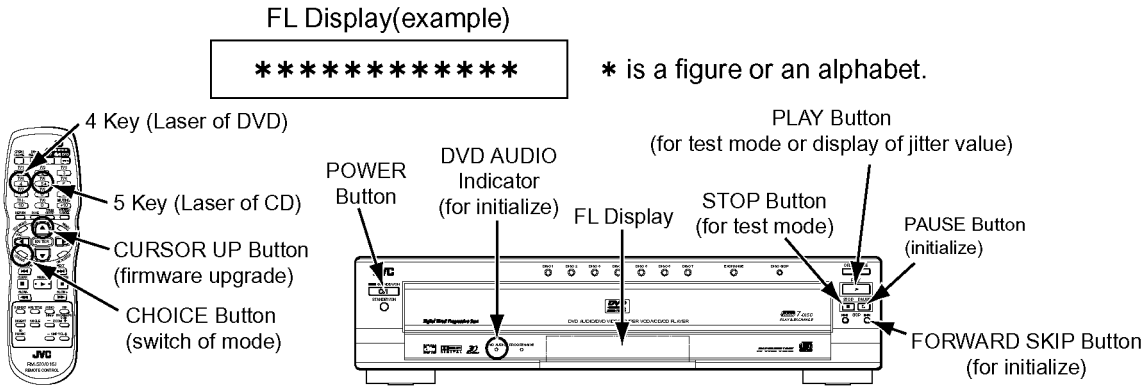
4.3 Method of displaying version of microcomputer

(1) Makes to test mode and initializes
(2) When "CHOICE" button of remote controller is pushed once, the figure is displayed on the FL display as follows.
* Version number of decoder is displayed on the television screen.
* Last two digits are displayed on the FL display for the treble version number.



4.4 Method of displaying device key index

(1) Makes to test mode and initializes.
(2) When "CHOICE" button of remote controller is pushed twice, the device key index is displayed on the FL display as follows.



4.5 Display of current value of laser

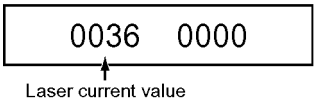
(1) Makes to test mode and initializes.

(2) When "CHOICE" key of remote controller is pushed four times, It is displayed on the FL display, "CHECK".

(3) Afterwards, the laser current value can be switched by pushing the key to remote controller without turning on the disc.

Remote controller "4" key --- Laser of DVD
Remote controller "5" key --- Laser of CD

FL Display (example)



As for the current value of the laser, the figure displayed on the FL display becomes a current value as it is by "mA" unit. becomes 36 mA if displayed as 36.

(4) The laser output stops if the "STOP" key to remote controller is pushed.

It can be judged it is simply good if the displayed current value of the laser is smaller than that of the undermentioned value. Moreover, there must be a deteriorated possibility and the pick-up must exchange the pick-up more than the undermentioned value.

Laser current value of CD ------ 49 mA or less
Laser current value of DVD ---- 64 mA or less

4.6 Display of jitter value

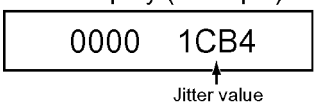
(1) Makes to test mode and initializes.

(2) When "CHOICE" key of remote controller is pushed four times, It is displayed on the FL display, "CHECK".

(3) The test disk (VT-501) is inserted, and the "PLAY" key to the main body is pushed.

(4) The jitter value is displayed on the FL display as follows.

FL Display (example)

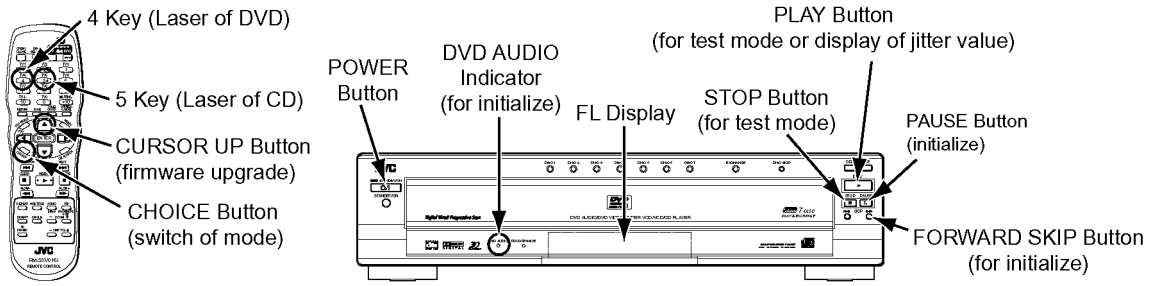


Values to judge whether the jitter is allowable or not is displayed, instead of actual jitter values.The displayed values are expressed in hexadecimal numbers.

In the following cases, please "Flap adjustment of the pick-up guide shaft" referring to the following page.
Before using the TEST disc VT-501, careful check it if there is neither damage nor dirt on the read surface.

< In the following cases, please adjustment >

- **When you exchange the pick-up**
- **When you exchange the spindle motor**
- **When the reading accuracy of the signal is bad (There is a block noise in the screen etc..)**



4.7 Flap adjustment of the pick-up guide shaft

<Tool list for adjustment>

Stud (four pieces set)

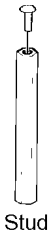
Parts No. : JIGXVS40

Hex wrench for adjustment

Off-the-shelf (1.3mm)

Test disc

VT-501 or VT-502



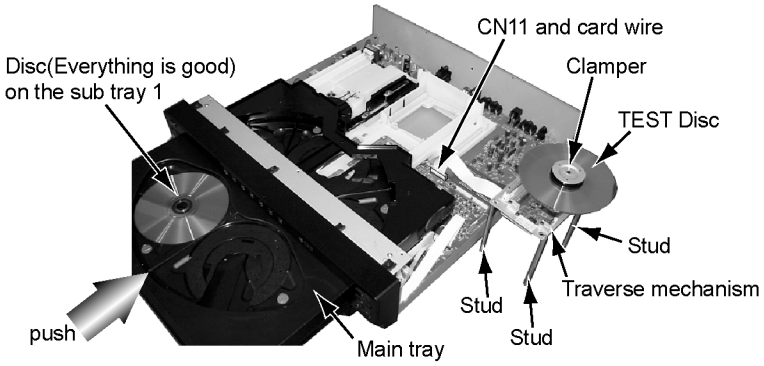
Stud

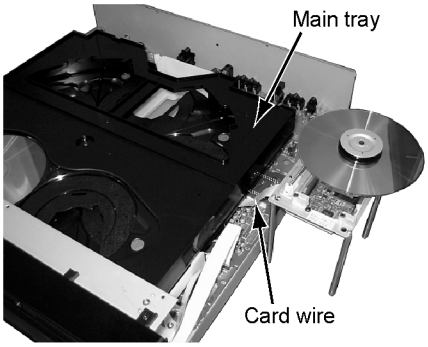
<Adjustment preparation>

(1) The metal cover is detached, the "OPEN/CLOSE" button is pushed, and the tray is done in open.
(2) The AC plug code is pulled out once in the state.
(3) Remove the surround audio board and surround audio terminal board respectively.
(4) The traverse mechanism is detached, and the card wire is connected with CN11.
(5) The stud is installed in the traverse mechanism as shown in Figure.
The clamper is removed from the clamper base.
(6) The disk (Everything is good) is put on sub-tray 1, the test disk is put on the turntable in the traverse mechanism, and fixes by the clamper.
(7) The card wire becomes under the main tray, and the main tray is closed by hand operated.
(8) The AC plug code is inserted, and the "DISC1" button is pushed
(Please push the "DISC1" button directly without pushing the power supply button).
(9) Because the playback of "DISC1" starts, stops and the AC plug code is pulled out.

<Adjustment method>

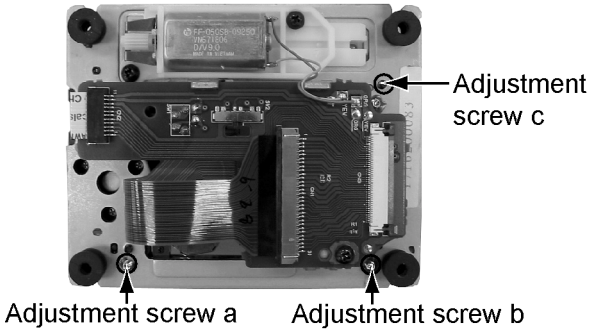
(10) The AC plug code is made insertion test mode while pushing the "PLAY" button and the "STOP" button of the main body at the same time.
(11) Please push the "PAUSE" button after pushing the "FORWARD SKIP" button of the main body, and confirm DVD AUDIO indicator lights after a few seconds.
(12) When the "CHOICE" button of remote controller is pushed three times, it is displayed on the FL display as "CHECK".
(13) The display of the FL display changes into "CHECK OK" after a few seconds if the "PAUSE" button of the main body is pushed in the state.
When the "PLAY" button of the main body is pushed afterwards, the jitter value is displayed on the FL display.





<Adjustment>

(1) Puts into the state to display the jitter value on the FL display referring to "Display of jitter value".
(2) The adjustment screw under the traverse mechanism is turned with hex wrench, and matches so that the jitter value displayed on the FL display may become **maximum** value.

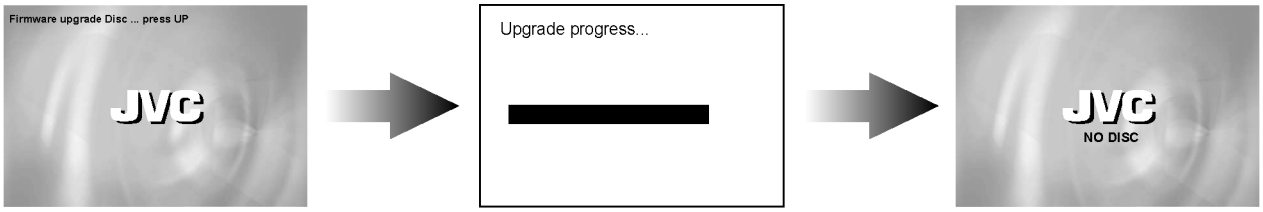


<POINT>

(1) turns in the forward or the opposite direction, and makes to the position where the jitter value is good the half rotation of adjustment screw a and b(180 degrees) respectively.
(2) Afterwards, adjustment screw b and c are turned in the same way, and makes to the best position.
* As this value is bigger, the jitter is more allowable in this model.

4.8 Upgrading of firmware

(1) The power supply is turned on pushing the "POWER" key.
(2) The up-grade disc is inserted.
(3) When FL display of the main body changes from "READING" into "UPGRADE", cursor "UP" key (▲) of remote controller is pushed.
(4) The up-grade starts if the entire screen becomes blue and it is displayed, "Upgrade progress".
(5) The tray opens automatically, the up-grade disc is removed.
(6) The up-grade ends if the tray closes automatically, and the screen returns to the normal screen.
(7) Please confirm the version of the microcomputer after makes to test mode and initializes.



After inserting the up-grade disc　　Upgrading (blue screen)　　When up-grade is completed

4.9 Display of region code

(1) Makes to the stand-by state.
(2) The "POWER" key is pushed while pushing the "BACK SKIP" key and the "FORWARD SKIP" key to the main body.
(3) Region code is displayed on the FL display as follows.

FL Display

REGION__ ∗

∗ = Region code

< ATTENTION ! >
Please pull out the AC plug code after the standby indicator lights pushing the power supply button without fail after completing the repair.
The mechanism becomes initialed position.
There is a possibility to break when carrying in not initialed position the mechanism but the state.

4.10 Confirm method of operation

Please confirm the operation of the undermentioned item after doing the repair and the upgrade of the firmware.

The EEPROM is initialized.

Refer to the initialization method.

Opening picture check (Power ON)

It should be display "JVC"

Muting working

The noise must not be had to the performance beginning when you push "PLAY" button or at ON/STANDBY.

FL Display

The mark and the logo, etc. displayed by each operation must be displayed correctly.
FL Display should light correctly without any unevenness.

All Function button

All function buttons should worked correctly with moderate click feeling.

Open and close movement of tray

When press OPEN/CLOSE button the tray should move smoothly without any noise.

Remote controller unit working

Check the correctly operation in use of remote controller unit.

Reading of TOC

Be not long in the malfunction.

Search

Both forward-searches and backward-searches should be able to be done.
Do not stop be searching or after the search.

Skip

Both forward-skip and backward-skip should be able to be done.
Do not stop be after the skip.

Playback

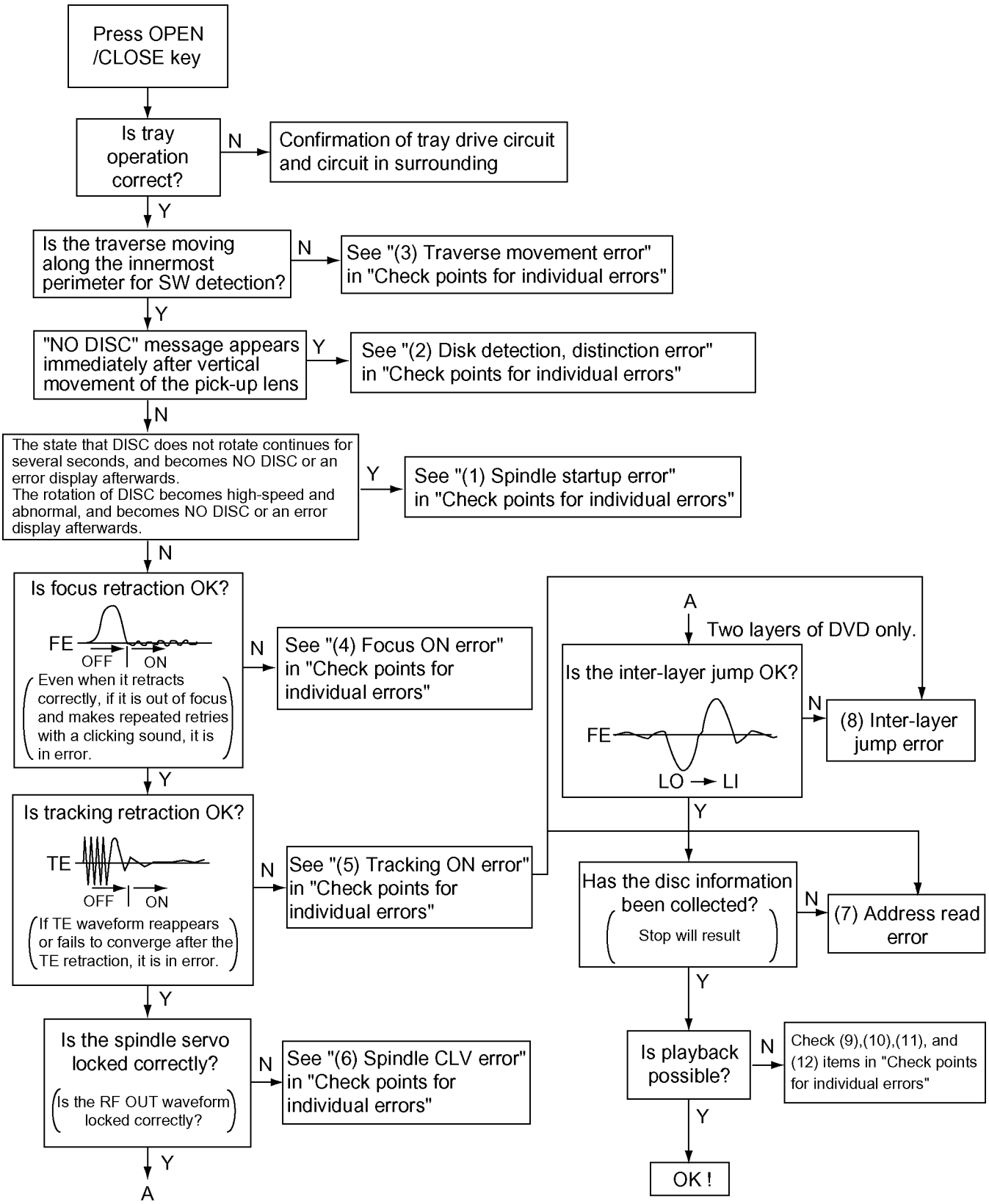
Do not find abnormality etc. of tone quality and the picture quality.

Most outside TITLE playback check

Play VT-501 TITLE 59 CHAPTER 1 , check normal playback.

4.11 Troubleshooting

Servo volume


Press OPEN /CLOSE key
Is tray operation correct?
N
Confirmation of tray drive circuit and circuit in surrounding
Y
Is the traverse moving along the innermost perimeter for SW detection?
N
See "(3) Traverse movement error" in "Check points for individual errors"
Y
"NO DISC" message appears immediately after vertical movement of the pick-up lens
Y
See "(2) Disk detection, distinction error" in "Check points for individual errors"
N
The state that DISC does not rotate continues for several seconds, and becomes NO DISC or an error display afterwards.
The rotation of DISC becomes high-speed and abnormal, and becomes NO DISC or an error display afterwards.
Y
See "(1) Spindle startup error" in "Check points for individual errors"
N
Is focus retraction OK?
FE
OFF
ON
Even when it retracts correctly, if it is out of focus and makes repeated retries with a clicking sound, it is in error.
N
See "(4) Focus ON error" in "Check points for individual errors"
Y
Is tracking retraction OK?
TE
OFF
ON
If TE waveform reappears or fails to converge after the TE retraction, it is in error.
N
See "(5) Tracking ON error" in "Check points for individual errors"
Y
Is the spindle servo locked correctly?
Is the RF OUT waveform locked correctly?
N
See "(6) Spindle CLV error" in "Check points for individual errors"
Y
A
A
Two layers of DVD only.
Is the inter-layer jump OK?
FE
LO → LI
N
(8) Inter-layer jump error
Y
Has the disc information been collected?
Stop will result
N
(7) Address read error
Y
Is playback possible?
N
Check (9),(10),(11), and (12) items in "Check points for individual errors"
Y
OK !

4.12 Check points for each error

4.12.1 Spindle start error

(1) Defective spindle motor
*Are there several ohms resistance between each pin of CN11 "7-6","6-5","7-5"?
(The power supply is turned off and measured.)
*Is the sign wave of about 100mVp-p in the voltage had from each terminal?
[CN11"10"(H1-),"9"(H1+),"12"(H2-),"11"(H2+),"14"(H3-),"13"(H3+)]

(2) Defective spindle motor driver (IC251)
*Has motor drive voltage of a sine wave or a rectangular wave gone out to each terminal(SM1~3) of CN11"5,6,7" and IC251"2,4,7"?
*Is FG pulse output from the terminal of IC251"24"(FG) according to the rotation of the motor?
*Is it "L(about 0.9V)" while terminal of IC251"15"(VH) is rotating the motor?

(3) Has the control signal come from servo IC or the microcomputer?
*Is it "L" while the terminal of IC251"18"(SBRK) is operating?
Is it "H" while the terminal of IC251"23"(/SPMUTE) is operating?
*Is the control signal input to the terminal of IC251"22"(EC)?
(changes from VHALF voltage while the motor is working.)
*Is the VHALF voltage input to the terminal of IC251"21"(ECR)?

(4) Is the FG signal input to the servo IC?
*Is FG pulse input to the terminal of IC301"69"(FG) according to the rotation of the motor?

4.12.2 Disc Detection, Distinction error (no disc, no RFENV)

<About frontend section>

* Laser is defective.
* Front End Processor is defective (IC101).
* APC circuit is defective. --- Q101,Q102.
* Pattern is defective. --- Lines for CN11 - All patterns which relate to pick-up and patterns between IC101
* Servo IC is defective (IC301). * IC101 --- For signal from IC101 to IC301, is signal output from IC101 "20" (ASOUT) and IC101 "41"(RFENV) and IC101 "22" (FEOUT)?

<About loading mechanism section>

* The disc exists in a sub tray. However, a sub tray is sent as follows the turntable without rising.
(Especially, when the disk is CD-RW)

--- IC81 is defective. Exchanges for "GP2S28J" of the rank specification parts.

4.12.3 Traverse movement NG

(1) Defective traverse driver
*Has the voltage come between terminal of CN11 "28" and "30" ?

(2) Defective BTL driver (IC201)
*Has the motor drive voltage gone out to IC201"17" or "18"?

(3) Has the control signal come from servo IC or the microcomputer?
*Is it "H" while the terminal of IC201"9"(STBY1) ?
*TRSDRV Is the signal input? (IC301 "67")

(4) TRVSW is the signal input from microcomputer? (IC401 "50")

4.12.4 Focus ON NG

* Is FE output ? --- Pattern, IC101
* Is FODRV signal sent ? (R209) --- Pattern, IC301 "115"
* Is driving voltage sent ?
IC201 "13", "14" --- If NG, pattern, driver, mechanical unit .
* Mechanical unit is defective.

4.12.5 Tracking ON NG

* When the tracking loop cannot be drawn in, TE shape of waves does not settle.
* Mechanical unit is defective.
Because the self adjustment cannot be normally adjusted, the thing which cannot be normally drawn in is thought.
* Periphery of driver (IC201)
Constant or IC it self is defective.
* Servo IC (IC301)
When improperly adjusted due to defective IC.

4.12.6 Spindle CLV NG

* IC101 -- "35"(RF OUT), "30"(RF-), "31(RF+).
* Does not the input or the output of driver's spindle signal do the grip?
* Has the tracking been turned on?
* Spindle motor and driver is defective.
* Additionally, "IC101 and IC301" and "Mechanism is defective(jitter)", etc. are thought.

4.12.7 Address read NG

* Besides, the undermentioned cause is thought though specific of the cause is difficult because various factors are thought.
Mechanism is defective. (jitter)
IC301, IC401.
The disc is dirty or the wound has adhered.

4.12.8 Between layers jump NG (double-layer disc only)

Mechanism defective
Defect of driver's IC(IC201)
Defect of servo control IC(IC301)

4.12.9 Neither picture nor sound is output

(1) It is not possible to search
*Has the tracking been turned on?
*To "4.10.5 Tracking ON NG" in "Check points for each error" when the tracking is not normal.
*Is the feed operation normal?
To "4.10.3 traverse movement NG" in "Check points for each error" when it is not normal.
Are not there caught of the feeding mechanism etc?

4.12.10 Picture is distorted or abnormal sound occurs at intervals of several seconds.

Is the feed operation normal?
Are not there caught of the feeding mechanism etc?

4.12.11 Others

The image is sometimes blocked, and the image stops.
The image is blocked when going to outer though it is normal in surroundings in the disk and the stopping symptom increases.
} There is a possibility with bad jitter value for such a symptom.

4.12.12CD During normal playback operation

a) Is TOC reading normal?
Displays total time for CD-DA.
Shifts to double-speed mode for V-CD.

↓ YES

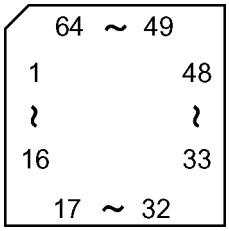
b) Playback possible? NO →

*--:-- is displayed during FL search.
According to [It is not possible to search] for DVD, check the feed and tracking systems.
*No sound is output although the time is displayed.(CA-DA)
DAC, etc, other than servo.
*The passage of time is not stable, or picture is abnormal.(V-CD)
*The wound of the disc and dirt are confirmed.

SECTION 5
Description of major ICs

5.1 AN8703FH-V (IC101) : Frontend processor

• Pin layout

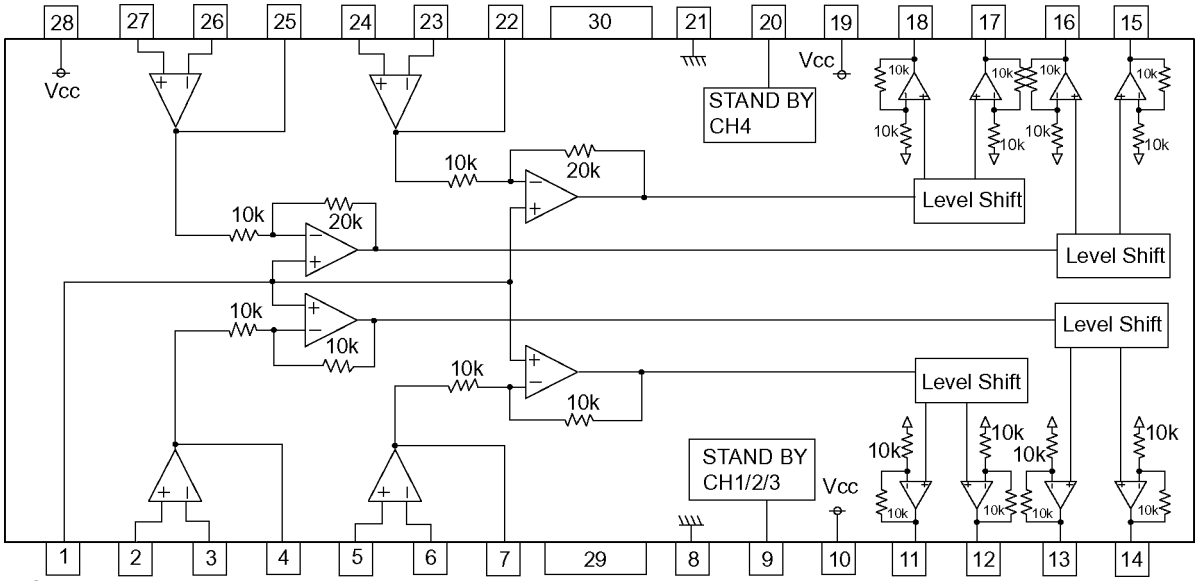


• Pin function

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	LPC1	I	Laser input terminal (DVD)	34	RFDIFO	-	Non connect
2	LPC01	O	Laser drive signal output terminal (DVD)	35	RFOUT	-	Connect to TP103
3	LPC2	I	Laser input terminal (CD)	36	VCC3	-	Power supply terminal 3.3V
4	LPC02	O	Laser drive signal output terminal (CD)	37	RFC	O	Filter for RF delay correction AMP.
5	VFOSHORT	I	VFOSHORT control terminal	38	DCRF	O	All addition amplifier capacitor terminal
6	TBAL	I	Tracking balance control terminal	39	OFTR	O	OFTR output terminal
7	FBAL	I	Focus balance control terminal	40	BDO	O	BDO output terminal
8	POFLT	O	Track detection threshold level terminal	41	RFENV	O	RF envelope output terminal
9	DTRD	I	Data slice part data read signal input terminal(For RAM)	42	BOTTOM	O	Bottom envelope detection filter terminal
				43	PEAK	O	Peak envelope detection filter terminal
10	IDGT	I	Data slice part address part gate signal input terminal(For RAM)	44	AGCG	O	AGC amplifier gain control terminal
				45	AGCO	O	AGC amplifier level control terminal
11	STANDBY	I	Standby mode control terminal	46	TESTSG	I	TEST signal input terminal
12	SEN	I	SEN(Serial data input terminal)	47	RFINP	I	RF signal positive input terminal
13	SCK	I	SCK(Serial data input terminal)	48	RFINN	I	RF signal negative input terminal
14	STDI	I	STDI(Serial data input terminal)	49	VIN5	I	Internal four-partition (CD) RF input 1
15	RSCL	I	Standard electric current terminal	50	VIN6	I	Internal four-partition (CD) RF input 2
16	JLINE	I	Electric current setting terminal of JLine	51	VIN7	-	Internal four-partition (CD) RF input 3
17	TEN	I	Reversing input terminal of tracking error output AMP.	52	VIN8	-	Internal four-partition (CD) RF input 4
18	TEOUT	O	Tracking error signal output terminal	53	VIN9	I	External two-partition (DVD) RF input 2
19	AGCBAL	I	Offset adjusting terminal 1	54	VIN10	I	External two-partition (DVD) RF input 1
20	ASOUT	O	Full adder signal output terminal	55	VCC1	-	Power supply terminal 5V
21	FEN	I	Focus error output amplifier reversing input terminal	56	VREF1	O	VREF1 voltage output terminal
22	FEOUT	O	Focus error signal output terminal	57	VIN1	I	Internal four-partition (DVD) RF input 1
23	AGCOFST	I	Offset adjusting terminal 2				
24	MON	-	Non connect	58	VIN2	I	Internal four-partition (DVD) RF input 2
25	AGCLVL	O	Output amplitude adjustment for DRC				
26	GND2	-	Connect to GND	59	VIN3	I	Internal four-partition (DVD) RF input 3
27	VREF2	O	VREF2 voltage output terminal				
28	VCC2	-	Power supply terminal 5V	60	VIN4	I	Internal four-partition (DVD) RF input 4
29	VHALF	O	VHALF voltage output terminal				
30	DFLTON	O	Reversing output terminal of filter AMP.	61	GND1	-	Connect to GND
31	DFLTOP	O	Filter AMP. output terminal	62	VIN11	I	3 beam sub input terminal 2 (CD)
32	DCFLT	I	Capacity connection terminal for filter output	63	VIN12	I	3 beam sub input terminal 1 (CD)
33	GND3	-	Connect to GND	64	HDTYPE	O	HD Type selection

5.2 BA5983FM-X (IC201) : 4CH Driver

- **Block diagram**

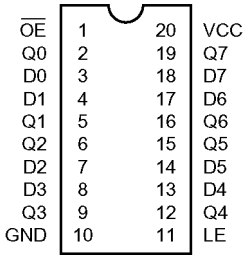


- **Pin function**

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	BIAS IN	I	Input for Bias-amplifier	16	VO4(-)	O	Inverted output of CH4
2	OPIN1(+)	I	Non inverting input for CH1 OP-AMP	17	VO3(+)	O	Non inverted output of CH3
3	OPIN1(-)	I	Inverting input for CH1 OP-AMP	18	VO3(-)	O	Inverted output of CH3
4	OPOUT1	O	Output for CH1 OP-AMP	19	PowVcc2	-	Vcc for CH3/4 power block
5	OPIN2(+)	I	Non inverting input for CH2 OP-AMP	20	STBY2	I	Input for Ch4 stand by control
6	OPIN2(-)	I	Inverting input for CH2 OP-AMP	21	GND	-	Substrate ground
7	OPOUT2	O	Output for CH2 OP-AMP	22	OPOUT3	O	Output for CH3 OP-AMP
8	GND	-	Substrate ground	23	OPIN3(-)	I	Inverting input for CH3 OP-AMP
9	STBY1	I	Input for CH1/2/3 stand by control	24	OPIN3(+)	I	Non inverting input for CH3 OP-AMP
10	PowVcc1	-	Vcc for CH1/2 power block	25	OPOUT4	O	Output for CH4 OP-AMP
11	VO2(-)	O	Inverted output of CH2	26	OPIN4(-)	I	Inverting input for CH4 OP-AMP
12	VO2(+)	O	Non inverted output of CH2	27	OPIN4(+)	I	Non inverting input for CH4 OP-AMP
13	VO1(-)	O	Inverted output of CH1	28	PreVcc	-	Vcc for pre block
14	VO1(+)	O	Non inverted output of CH1	29		-	Connect to ground
15	VO4(+)	O	Non inverted output of CH4	30		-	Connect to ground

5.3 74LCX373MTC-X(IC512,IC513)

- **Pin layout**



- **Pin function**

Symbol	Description
D0~D7	Data inputs
LE	Latch enable input
$\overline{OE}$	Output enable input
Q0~Q7	3-State latch outputs

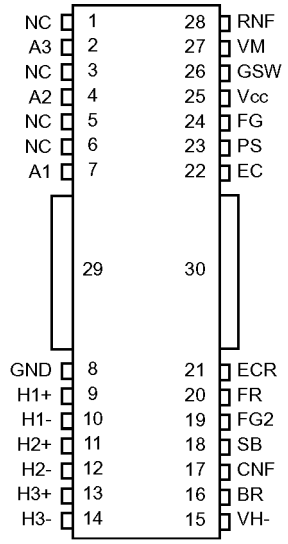
- **Truth table**

INPUTS			OUTPUTS
LE	$\overline{OE}$	Dn	Qn
X	H	X	Z
H	L	L	L
H	L	H	H
L	L	X	Q0

H = HIGH Voltage level
L = LOW Voltage level
Z = High impedance
X = Immaterial
Q0 = Previous Q0 before HIGH to LOW transition of latch enable

5.4 BA6664FM-X (IC251) : Spindle motor driver

- **Pin layout**

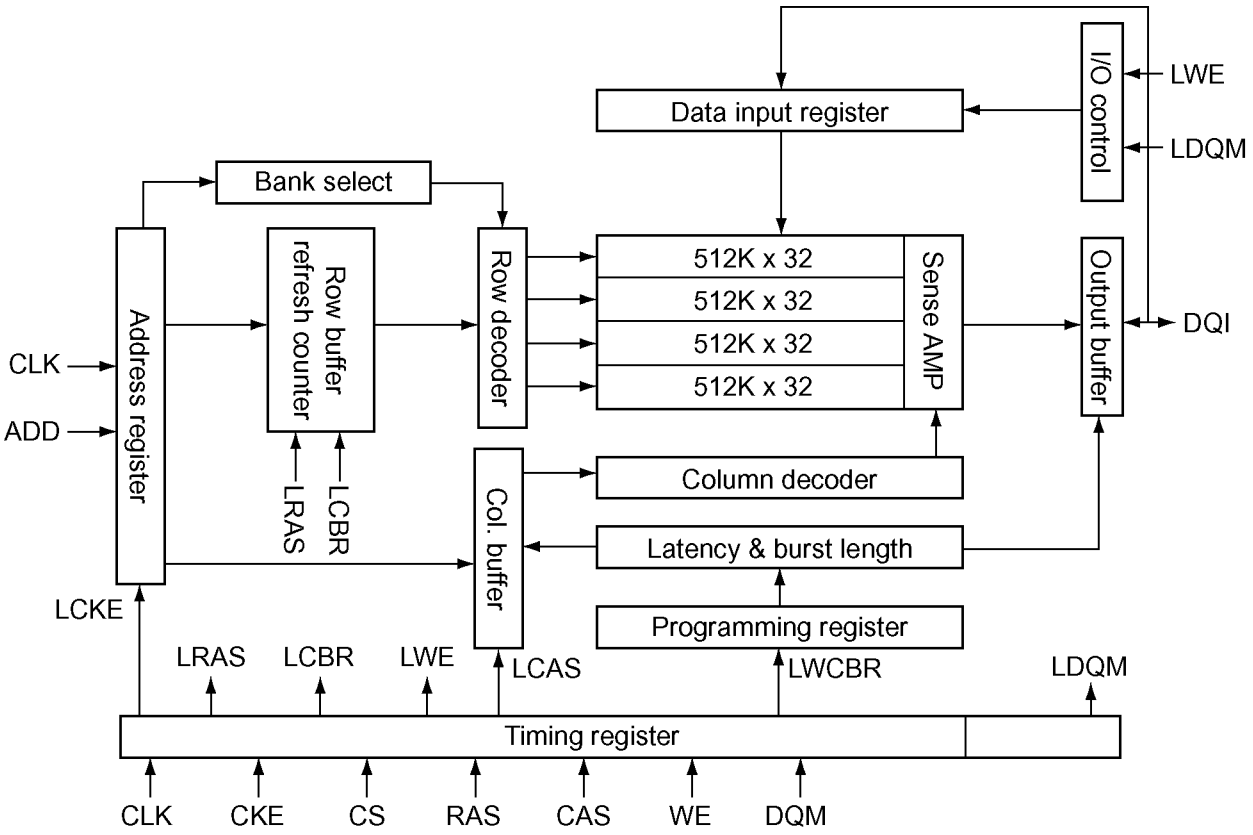


- **Pin function**

Pin No.	Symbol	I/O	Description
1	NC	-	Non connect
2	A3	O	Output 3 for spindle motor
3	NC	-	Non connect
4	A2	O	Output 2 for spindle motor
5	NC	-	Non connect
6	NC	-	Non connect
7	A1	O	Output 1 for spindle motor
8	GND	-	Connect to ground
9	H1+	I	Positive input for hall input AMP 1
10	H1-	I	Negative input for hall input AMP 1
11	H2+	I	Positive input for hall input AMP 2
12	H2-	I	Negative input for hall input AMP 2
13	H3+	I	Positive input for hall input AMP 3
14	H3-	I	Negative input for hall input AMP 3
15	VH	I	Hall bias terminal
16	BR	-	Non connect
17	CNF	-	Capacitor connection pin for phase compensation
18	SB	I	Short brake terminal
19	FG2	-	Non connect
20	FR	-	Non connect
21	ECR	I	Torque control standard voltage input terminal
22	EC	I	Torque control voltage input terminal
23	PS	O	Start/stop switch (power save terminal)
24	FG	O	FG signal output terminal
25	VCC	-	Power supply for signal division
26	GSW	O	Gain switch
27	VM	-	Power supply for driver division
28	RNF	O	Resistance connection pin for output current sense
29		-	Connect to ground
30		-	Connect to ground

5.5 K4S643232E-TC60(IC505):DRAM

- **Block diagram**



- **Pin function**

Symbol	Description	Symbol	Description
CLK	System clock signal input	DQM0~3	Data input/output mask
CS	Chip select input	DQ0~31	Data input/output
CKE	Clock enable	VDD	Power supply terminal
A0~A10	Address	VSS	Connect to ground
BA0,1	Bank select address	VDDQ	Power supply terminal
RAS	Row address strobe	VSSQ	Connect to ground
CAS	Column address strobe	NC	Non connect
WE	Write enable		

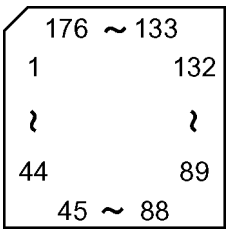
5.6 MN102L62GLK(IC401):Unit CPU

- **Pin function**

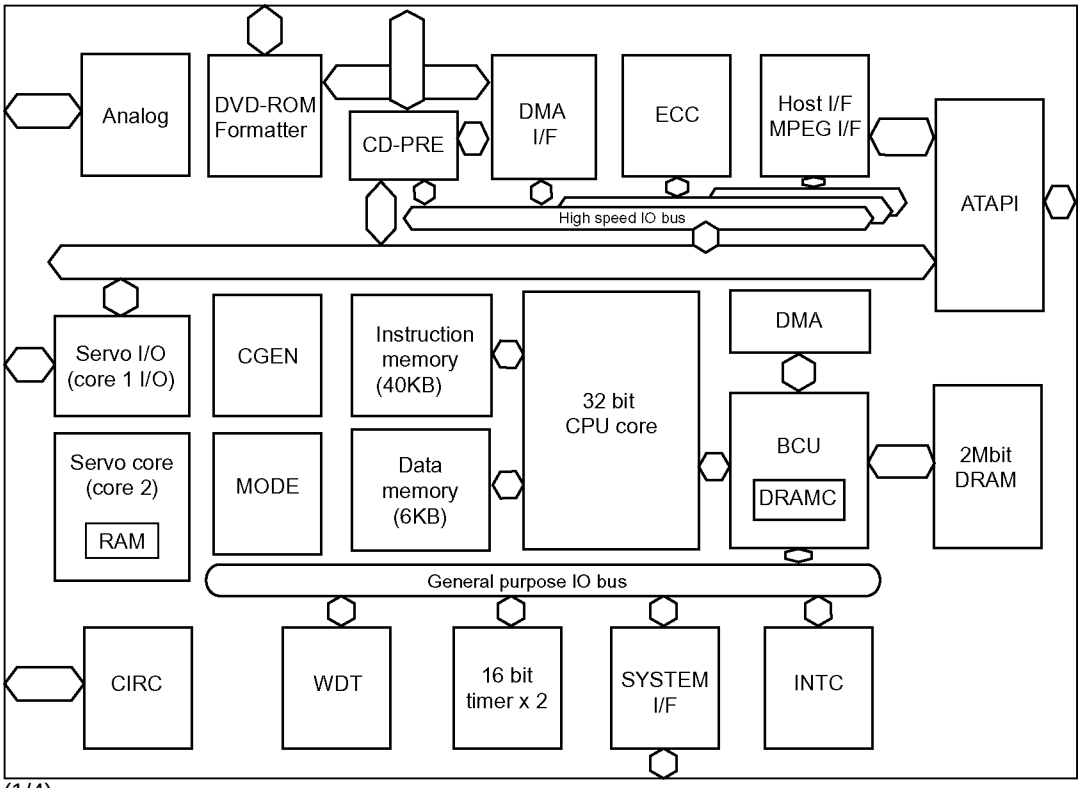
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	WAIT	I	Micon wait signal input	51	SWUPDN	-	Non connect
2	RE	O	Read enable	52	MECHA-H/V	-	Not use
3	SPMUTE	O	Spindle muting output to IC251	53	DISCSET	I	Mechanism state signal input
4	WEN	O	Write enable	54	VDD	-	Power supply
5	LMMUTE	-	Non connect	55	FEPEN	O	Serial enable signal for FEP
6	CS1	O	Chip select for ODC	56	SLEEP	O	Standby signal for FEP
7	CS2	-	Non connect	57	BUSY	-	Non connect
8	HDTYPE	O	HD Type selection	58	REQ	O	Communication Request
9	DRVMUTE	O	Driver mute	59	-	-	Connect to TP405
10	SBRK	O	Short breake terminal	60	-	-	Non connect
11	LSIRST	O	LSI reset	61	VSS	-	Ground
12	WORD	O	Bus selection input	62	EPCS	O	EEPROM chip select
13	A0	O	Address bus 0 for CPU	63	EPSK	O	EEPROM clock
14	A1	O	Address bus 1 for CPU	64	DPDI	I	EEPROM data input
15	A2	O	Address bus 2 for CPU	65	EPDO	O	EEPROM data output
16	A3	O	Address bus 3 for CPU	66	VDD	-	Power supply
17	VDD	-	Power supply	67	SCLKO	I	Communication clock
18	SYSCLK	-	Non connect	68	S2UDT	I	Communication input data
19	VSS	-	Ground	69	U2SDT	O	Communication output data
20	XI	I	Oscillation terminal	70	CPSCK	O	Clock for ADSC serial
21	XO	-	Non connect	71	P74/SBI1	I	Not use(Pull up)
22	VDD	-	Power supply	72	SDOUT	O	ADSC serial data output
23	OSCI	I	Clock signal input	73	-	-	Not use(Pull up)
24	OSCO	O	Clock signal output	74	-	-	Not use(Pull up)
25	MODE	I	CPU Mode selection input	75	NMI	I	NMI Terminal
26	A4	O	Address bus 4 for CPU	76	ADSCIRQ	I	Interrupt input of ADSC
27	A5	O	Address bus 5 for CPU	77	ODCIRQ	I	Interrupt input of ODC
28	A6	O	Address bus 6 for CPU	78	DECIRQ	I	Interrupt input of ZIVA
29	A7	O	Address bus 7 for CPU	79	CSSIRQ	-	Not use
30	A8	O	Address bus 8 for CPU	80	ODCIRQ2	I	Interruption of system control
31	A9	O	Address bus 9 for CPU	81	ADSEP	I	Address data selection input
32	A10	O	Address bus 10 for CPU	82	RST	I	Reset input
33	A11	O	Address bus 11 for CPU	83	VDD	-	Power supply
34	VDD	-	Power supply	84	TEST1	I	Test signal 1 input
35	A12	O	Address bus 12 for CPU	85	FA900-MODE	I	Test signal 2 input
36	A13	O	Address bus 13 for CPU	86	TEST3	I	Test signal 3 input
37	A14	O	Address bus 14 for CPU	87	TEST4	I	Test signal 4 input
38	A15	O	Address bus 15 for CPU	88	TEST5	I	Test signal 5 input
39	A16	O	Address bus 16 for CPU	89	TEST6	I	Test signal 6 input
40	A17	O	Address bus 17 for CPU	90	TEST7	I	Test signal 7 input
41	A18	-	Non connect	91	TEST8	I	Test signal 8 input
42	A19	-	Non connect	92	VSS	-	Ground
43	VSS	-	Ground	93	D0	I/O	Data bus 0 of CPU
44	A20	-	Non connect	94	D1	I/O	Data bus 1 of CPU
45	DISCSTP	O	Mechanism state signal output	95	D2	I/O	Data bus 2 of CPU
46	HAGUP	O	Connect to pick-up unit	96	D3	I/O	Data bus 3 of CPU
47	TCLOSE	-	Non connect	97	D4	I/O	Data bus 4 of CPU
48	WOBBLEF1L	O	Wobble circuit filter switch	98	D5	I/O	Data bus 5 of CPU
49	HFMON	O	HFM Control output to Q103	99	D6	I/O	Data bus 6 of CPU
50	TRVSW	I	Detection switch of traverse inside	100	D7	I/O	Data bus 7 of CPU

5.7 MN103S26EGA (IC301) : Super optical disc controller

- Terminal layout



- Block diagram



- Pin function (1/4)

Pin No.	Symbol	I/O	Description
1,2	NINT0,1	O	Interruption of system control 0,1
3	VDD3	-	Power supply terminal for I/O(3.3V)
4	VSS	-	Connect to ground
5	NINT2	O	Interruption of system control 2
6	WAITDOC	O	Wait control of system control
7	NMPST	O	Reset of system control (Non connect)
8	DASPST	I	Setting of initial value of DASP signal
9~17	CPUADR17~9	I	System control address
18	VDD18	-	Power supply terminal for I/O (1.8V)
19	VSS	-	Connect to ground
20	DRAMVDD18	-	Power supply terminal for DRAM (1.8V)
21	DRAMVSS	-	Connect to ground for DRAM
22~30	CPUADR8~0	I	System control address
31	VDD3	-	Power supply terminal for I/O (3.3V)
32	VSS	-	Connect to ground
33	DRAMVDD3	-	Power supply terminal for DRAM (3.3V)
34	NCS	I	System control chip select
35	NWR	I	Writing system control

• Pin function (MN103S28EGA : 2/4)

Pin No.	Symbol	I/O	Description
36	NRD	I	Read signal input from system controller
37~44	CPUDT7~0	I/O	System control data
45	CLKOUT1	-	Non connect
46	MMOD	I	Test mode switch signal
47	NRST	I	System reset
48	MSTPOL	I	Master terminal polarity switch input
49	SCLOCK	-	Non connect
50	SDATA	-	Non connect
51	OFTR	I	Off track signal input
52	BDO	I	Drop out signal input
53~56	PWM1~4	-	Non connect
57	VDD3	-	Power supply terminal for I/O (3.3V)
58	DRAMVDD18	-	Power supply terminal for DRAM (1.8V)
59	DRAMVSS	-	Connect to ground for DRAM
60	VSS	-	Connect to ground
61~64	PWM5~8	-	Non connect
65	TBAL	O	Tracking balance adjustment output
66	FBAL	O	Focus balance adjustment output
67	TRSDRV	O	Traverse drive output
68	SPDRV	O	Spindle drive output
69	FG	I	Motor FG input
70	TILTP	-	Non connect
71	TILT	-	Non connect
72	TILTN	-	Non connect
73	TX	O	Digital output signal
74	DTRD	-	Non connect
75	IDGT	-	Non connect
76	VDD18	-	Power supply terminal for I/O (1.8V)
77	VSS	-	Connect to ground
78	VDD3	-	Power supply terminal for I/O (3.3V)
79	OSCI1	I	Oscillation input 16.9MHz
80	OSCO1	O	Oscillation output 16.9MHz
81	VSS	-	Connect to ground
82	TSTSG	O	Calibration signal
83	VFOSHORT	O	VFO short output
84	JLINE	O	J-line setting output
85	AVSSD	-	Connect to ground for analog circuit
86	ROUT	-	Non connect
87	LOUT	-	Non connect
88	AVDD	-	Power supply terminal for analog circuit (3.3V)
89	VCOF	I	JFVCO control voltage
90	TRCRS	I	Input signal for track cross formation
91	CMPIN	-	Non connect
92	LPFOUT	-	Non connect
93	LPFIN	I	Pull-up to VHALF
94	AVSS	-	Connect to ground for analog circuit
95	HPFOUT	-	Non connect
96	FPFIN	I	HPF input
97	CSLFLT	I	Pull-up to VHALF
98	RFDIF	-	Non connect
99	AVDDC	-	Power supply terminal for analog circuit (3.3V)
100	PLFLT2	I	Connect to capacitor 2 for PLL

• Pin function (MN103S28EGA : 3/4)

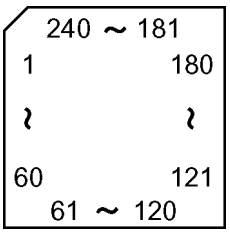
Pin No.	Symbol	I/O	Description
101	PLFLT1	I	Connect to capacitor 1 for PLL
102	AVSS	-	Connect to ground for analog circuit
103	RVI	I	Connect to resistor for VREF reference current source
104	VREFH	I	Reference voltage input (2.2V)
105	PLPG	-	Non connect
106	VHALF	I	Reference voltage input (1.65V)
107,108	DSLF2,1	I	Connect to capacitor 2,1 for DSL
109	AVDD	-	Power supply terminal for analog circuit (3.3V)
110	NARF	I	Equivalence RF-
111	ARF	I	Equivalence RF+
112	JITOUT	O	Output for jitter signal monitor
113	AVSS	-	Connect to ground for analog circuit
114	DAC0	O	Tracking drive output
115	DAC1	O	Focus drive output
116	AVDD	-	Power supply terminal for analog circuit (3.3V)
117	AD0	I	Focus error input
118	AD1	I	Phase difference/3 beams tracking error
119	AD2	I	AS : Full adder signal
120	AD3	I	RF envelope input
121	AD4	I	DVD laser current control terminal
122	AD5	I	Tracking driver monitor
123	AD6	I	CD laser current control terminal
124	TECAPA	-	Non connect
125	VDD3	-	Power supply terminal for I/O (3.3V)
126	VSS	-	Connect to ground
127	MONI0	-	Connect to TP306
128	MONI1	-	Connect to TP307
129	MONI2	-	Connect to TP308
130	MONI3	-	Connect to TP309
131	NEJECT	I/O	Eject detection
132	NTRYCTL	I/O	Tray close detection
133	NDASP	I/O	ATAPI drive active / slave connect I/O
134	NCS3FX	I	ATAPI host chip select
135	NCS1FX	I	ATAPI host chip select
136,137	DA2	I/O	ATAPI host address 2,0
138	NPDIAG	I/O	ATAPI slave master diagnosis input
139	DA1	I/O	ATAPI host address 1
140	NIOCS16	-	Non connect
141	INTRQ	O	ATAPI host interruption output
142	NDMACK	I	ATAPI host DMA characteristic
143	VDD3	-	Power supply terminal I/O (3.3V)
144	VSS	-	Connect to ground
145	IORDY	-	Non connect
146	NIORD	I/O	ATAPI host read
147	NIOWR	-	Non connect
148	DMARQ	-	Non connect
149	HDD15	I/O	ATAPI host data 15
150	HDD0	I/O	ATAPI host data 0
151	HDD14	I/O	ATAPI host data 14
152	VDD18	-	Power supply terminal for I/O (1.8V)
153	PO	I	Connect to ground
154	UATASEL	I	Connect to ground

• Pin function (MN103S28EGA : 4/4)

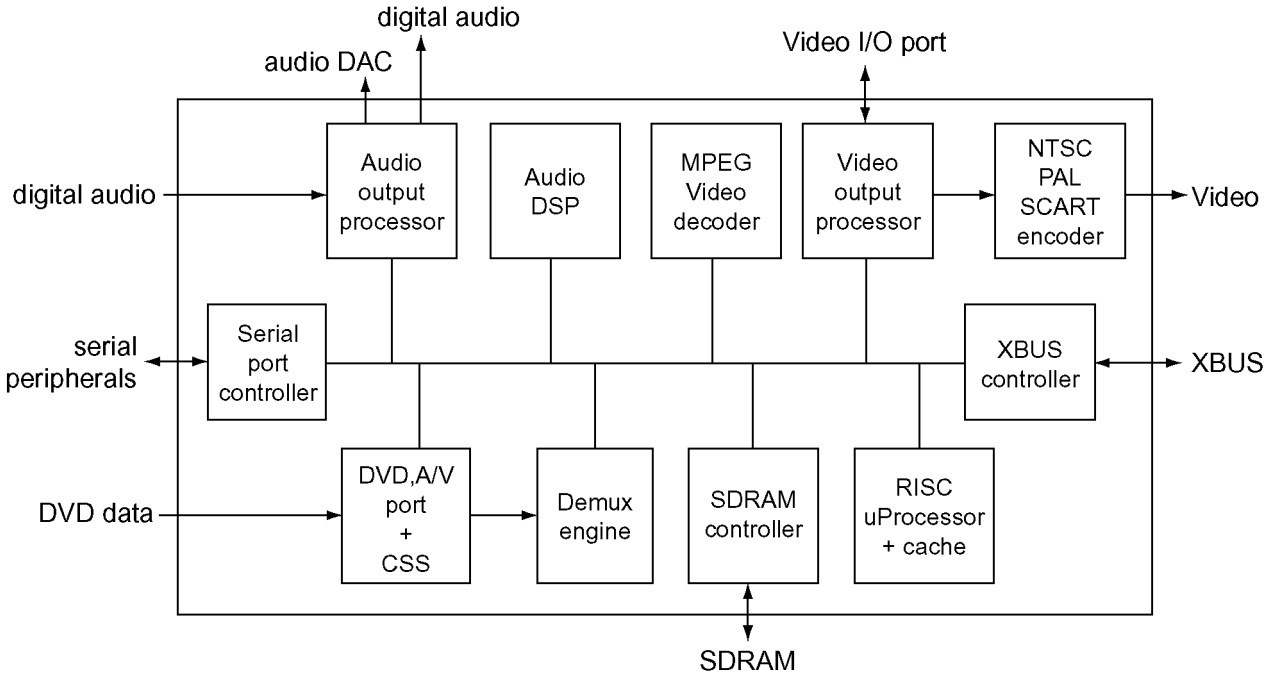
Pin No.	Symbol	I/O	Description
155	VSS	-	Connect to ground
156	VDD3	-	Power supply terminal for I/O (3.3V)
157	HDD1	I/O	ATAPI host data 1
158	HDD13	I/O	ATAPI host data 13
159	HDD2	I/O	ATAPI host data 2
160	HDD12	I/O	ATAPI host data 12
161	HDD3	I/O	ATAPI host data 3
162	VDD3	-	Power supply terminal for I/O (3.3V)
163	VSS	-	Connect to ground
164	HDD11	I/O	ATAPI host data 11
165	HDD4	I/O	ATAPI host data 4
166	HDD10	I/O	ATAPI host data 10
167	HDD5	I/O	ATAPI host data 5
168	HDD9	I/O	ATAPI host data 9
169	VDD3	-	Power supply terminal for I/O (3.3V)
170	VSS	-	Connect to ground
171~173	HDD6~8	I/O	ATAPI host data 6~8
174	VDDH	-	Reference power supply for ATAPI (5.0V)
175	NRESET	I	ATAPI host reset input
176	MASTER	I	ATAPI master / slave select

5.8 NDV8611VWA(IC501):AV Decoder

- Pin layout



- Block diagram



- Pin function (1/4)

Pin No.	Symbol		Description
1	VDDio	-	Power supply terminal 3.3V
2,3	MD10,11	I/O	SDRAM Data bus terminal
4	VDD	-	Power supply terminal 1.8V
5	MD12	I/O	SDRAM Data bus terminal
6	VSSio	-	Connect to ground
7~9	MD13~15	I/O	SDRAM Data bus terminal
10	VDDio	-	Power supply terminal 3.3V
11	DQM1	O	SDRAM Data byte enable
12,13	MA9,8	O	SDRAM Address bus terminal
14	VSSio	-	Connect to ground
15,16	MA7,6	O	SDRAM Address bus terminal
17	VSS	-	Connect to ground
18	MA5	O	SDRAM Address bus terminal
19	VDDio	-	Power supply terminal 3.3V
20,21	MA4,3	O	SDRAM Address bus terminal
22	MCLK	O	SDRAM Clock output
23	VSSio	-	Connect to ground
24	CKE	O	SDRAM Clock enable output
25,26	MA2,1	O	SDRAM Address bus terminal
27	VDDio	-	Power supply terminal 3.3V
28	MA0	O	SDRAM Address bus terminal
29	MA10	O	SDRAM Address bus terminal

• Pin function (NDV8611VWA 2/4)

Pin No.	Symbol	I/O	Description
30	MA11	-	Non connect
31	VSSio	-	Connect to ground
32,33	MA12,13	O	SDRAM Address bus, reserved for terminal compatibility with 64Mb SDRAM
34	VDD	-	Power supply terminal 1.8V
35	CS0	O	SDRAM Primary bank chip select
36	VDDio	-	Power supply terminal 3.3V
37	RAS	O	SDRAM Command bit
38	CAS	O	SDRAM Command bit
39	WE	O	SDRAM Command bit
40	VSSio	-	Connect to ground
41	DQM0	O	SDRAM Data byte enable
42	DQM2	O	SDRAM Data byte enable
43	MD16	I/O	SDRAM Data bus terminal
44	VDDio	-	Power supply terminal 3.3V
45,46	MD17,18	I/O	SDRAM Data bus terminal
47	VSS	-	Connect to ground
48	MD19	I/O	SDRAM Data bus terminal
49	VSSio	-	Connect to ground
50~52	MD20~22	I/O	SDRAM Data bus terminal
53	VDDio	-	Power supply terminal 3.3V
54~56	MD23~25	I/O	SDRAM Data bus terminal
57	VSSio	-	Connect to ground
58~61	MD26~29	I/O	SDRAM Data bus terminal
62	VDDio	-	Power supply terminal 3.3V
63,64	MD30,31	I/O	SDRAM Data bus terminal
65	DQM3	O	SDRAM Data byte enable
66	CS1	O	SDRAM Extension bank chip select
67	VSSD	-	Connect to ground
68	SPDIF	O	S/PDIF Digital audio output terminal
69	VSSio	-	Connect to ground
70	AIN	I	Digital audio input for digital micro; can be used as GPIO
71	AOUT3	O	Serial audio output data to audio DAC for left and right channels for down-mix
72	AOUT2	O	Serial audio output data to audio DAC for surround left and right channels
73	AOUT1	O	Serial audio output data to audio DAC for center and LFE channels
74	AOUT0	O	Serial audio output data to audio DAC for left and right channels
75	VDDio	-	Power supply terminal 3.3V
76	PCMCLK	O	Audio DAC PCM sampling clock frequency, common clock for DACs and ADC
77	VDD	-	Power supply terminal 1.8V
78	ACLK	O	Audio interface serial data clock, common clock for DACs and AD converter
79	LRCLK	O	Left / right channel clock, common clock for DACs and ADC
80	SRST	O	Active low RESET signal for peripheral reset
81	RSTP	I	RESET_Power : from system, used to reset frequency synthesizer and rest of chip
82	VSSio	-	Connect to ground
83	RXD1	I	UART1 Serial data input from external serial device, used for IR receiver
84	SSPIN1	I/O	SSP1 Data in or 16X clock for USART function in UART1
85	VSS	-	Connect to ground
86	SSPOUT1	I/O	SSP1 Data out or UART1 data-terminal-ready signal
87	SSPCLK1	I/O	SSP1 Clock or UART1 clear-to -send signal
88	SSPCLK0	I/O	SSP0 Clock or request-to-send function in UART1
89	VDD	-	Power supply terminal 1.8V
90	SSPIN0	I/O	SSP0 Data in or 16X clock for USART function in UART0

• Pin function (NDV8611VWA 3/4)

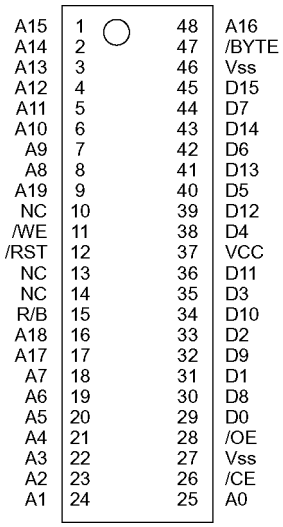
Pin No.	Symbol	I/O	Description
91	VDDio	-	Power supply terminal 3.3V
92	SSPOUT0	I/O	SSP0 Data out or UART0 data-terminal-ready signal
93	TXD0	I/O	UART0 Serial data output to an external serial device
94	RXD0	I	UART0 Serial data input from external serial device
95	CTS0	I/O	UART0 Clear-to-send signal
96	RTS0	I/O	UART0 Request-to-send signal
97	VSSio	-	Connect to ground
98	CXI	I	Crystal input terminal for on-chip oscillator or system input clock
99	CXO	O	Crystal output terminal for on-chip oscillator
100	OSCVSS	-	Connect to ground for oscillator
101	OSCVDD	-	Power supply terminal for oscillator 1.8V
102	MVCKVDD	-	Power supply terminal for main and video clock PLL 3.3V
103	SCEN	I	Scan chain test enable
104	MVCKVSS	-	Connect to ground for main and video clock PLL
105	ACLKVSS	-	Connect to ground for audio clock PLL
106	SCMD	I	Scan chain test mode
107	ACLKVDD	-	Power supply terminal for audio clock PLL 3.3V
108	VDDDAK	-	Power supply terminal for DAC digital 1.8V
109	VSSDAC	-	Connect to ground for DAC digital
110	Cr/R	O	Video signal output (Cr output : composite/component Red output)
111	IOM	O	Cascaded DAC differential output used to dump current into external resistor for power
112	C/Cb/B	O	Video signal output (Chrominance output for NTSC/PAL S-Video
113	VAA3	-	Cb output for component Blue output)
114	Y/G	O	Power supply terminal for DAC analog 3.3V
115	VSSA	-	Video signal output (Luminance for S-Video and component Green output)
116	VREF	-	Connect to ground for DAC analog
117	VAA	-	Non connect
118	CVBS/C	O	Video signal output (Composite video Chrominance output for S-Video)
119	RSET	O	Current setting resistor of output DACs
120	COMP	O	Compensation capacitor connection
121	VSS	-	Connect to ground
122	VCLK	-	Non connect
123	VSYNC	-	Non connect
124	HSYNC	-	Non connect
125	VDDio	-	Power supply terminal 3.3V
126~131	VI07~02	-	Non connect
132	VSSio	-	Connect to ground
133,134	VI01,00	-	Non connect
135	VDD	-	Power supply terminal 1.8V
136~139	AD31~28	I/O	Multiplexed address / data bus terminal
140	VDDio	-	Power supply terminal
141~144	AD27~24	I/O	Multiplexed address / data bus terminal
145	PWE3	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
146	AD23	I/O	Multiplexed address / data bus terminal
147	VSSio	-	Connect to ground
148~153	AD22~17	I/O	Multiplexed address / data bus terminal
154	VDDio	-	Power supply terminal 3.3V
155	AD16	I/O	Multiplexed address / data bus terminal
156	PWE2	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
157,158	AD15,14	I/O	Multiplexed address / data bus terminal
159	VDD	-	Power supply terminal 1.8V

• Pin function (NDV8611VWA 4/4)

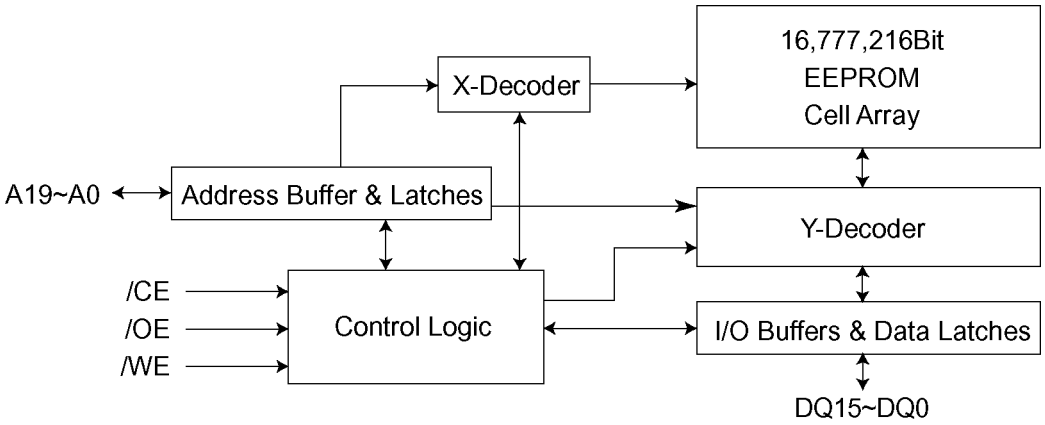
Pin No.	Symbol	I/O	Description
160	SCLK	O	External bus clock used for programmable host peripherals
161	ACK	I/O	Programmable WAIT/ACK/RDY control
162	VSSio	-	Connect to ground
163~168	AD13~8	I/O	Multiplexed address / data bus terminal
169	VDDio	-	Power supply terminal 3.3V
170	PWE1	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
171	VSS	-	Connect to ground
172~176	AD7~3	I/O	Multiplexed address / data bus terminal
177	VSSio	-	Connect to ground
178~180	AD2~0	I/O	Multiplexed address / data bus terminal
181	VDDio	-	Power supply terminal 3.3V
182	PWE0	I/O	Byte write enable for FLASH,EEPROM,SRAM or peripherals terminal
183	ALE	I/O	Address latch enable
184~187	LA0~3	I/O	Latched address 0~3
188	VSSio	-	Connect to ground
189	RD	I/O	Read terminal
190	LHLDA	O	Bus hold acknowledge in slave mode
191	LHLD	I	Bus hold request from external master in slave mode
192	VDD	-	Power supply terminal 1.8V
193	PCS0	O	Peripheral chip select 0, generally used for enabling the program store ROM/FLASH
194,195	XI01,02	I/O	Programmable general purpose external input/output
196	VDDio	-	Power supply terminal 3.3V
197~200	XI03~06	I/O	Programmable general purpose external input/output
201	VSS	-	Connect to ground
202,203	XI07,08	I/O	Programmable general purpose external input/output
204	VSSio	-	Connect to ground
205	XI09	I/O	Programmable general purpose external input/output
206~209	XID10~13	I/O	Programmable general purpose external input/output
210	VDDio	-	Power supply terminal 3.3V
211	XID14	I/O	Programmable general purpose external input/output
212	VDD	-	Power supply terminal 1.8V
213	DSYNC	I	DVD Parallel mode sector sync
214	DREQ	O	DVD Parallel mode data request
215	DCLK	I	Data sampling clock
216	DSTB	I	Parallel mode data valid, serial mode left/right clock
217	DVD0	I	DVD Drive parallel data port
218	VSSio	-	Connect to ground
219~223	DVD1~5	I	DVD Drive parallel data port
224	VDDio	-	Power supply terminal 3.3V
225,226	DVD6,7	I	DVD Drive parallel data port
227	MD0	I/O	SDRAM Data bus terminal
228	VSSio	-	Connect to ground
229	MD1	I/O	SDRAM Data bus terminal
230	VSS	-	Connect to ground
231,232	MD2,3	I/O	SDRAM Data bus terminal
233	VDDio	-	Power supply terminal 3.3V
234~236	MD4~6	I/O	SDRAM Data bus terminal
237	VSSio	-	Connect to ground
238~240	MD7~9	I/O	SDRAM Data bus terminal

5.9 SST39VF160-7CEK (IC509) : 16M EEPROM

- **Pin layout**



- **Block diagram**

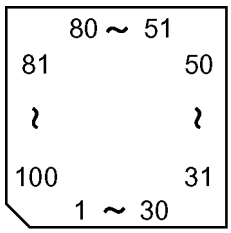


- **Pin function**

Symbol	Pin name	Function
A19~A0	Address Inputs	To provide memory addresses. During sector erase A19~A11 address lines will select the sector. During block erase A19~A15 address lines will select the block.
DQ15~DQ0	Data Input/Output	To output data during read cycles and receive input data during write cycles. Data is internally latched during a write cycle. The outputs are in tri-state when /OE or /CE is high.
/CE	Chip Enable	To activate the device when /CE is low.
/OE	Output Enable	To gate the data output buffers.
/WE	Write Enable	To control the write operations.
VCC	Power Supply	To provide 3-volt supply (2.7V-3.6V).
Vss	Ground	
NC	No Connection	

5.10UPD780206GF-125(IC801):System controller

- Pin layout



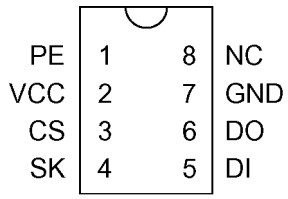
- Pin function

Pin No.	Symbol	I/O	Description
1	VDD	-	Power supply terminal (B5V)
2	NDD	I	Disc detection photo coupler input
3	PD	I	Play position photo coupler input
4	PON	O	Power ON signal output
5	CPURST	O	CPU Reset output
6	DISCSTP	I	Mechanism state signal input
7	DISCSET	O	Mechanism state signal output
8	POWERKEY	-	Power switch (S811) input terminal
9	EXIN	I	Exchange switch detection terminal (S81)
10	RESET	I	System reset input
11	X2	I/O	Main system clock oscillation terminal
12	X1	I/O	Main system clock oscillation terminal
13	IC		
14,15	XT2,XT1	-	Non connect
16	VDD	-	Power supply terminal (B5V)
17	RR	O	Sub tray right rotation driving signal
18	RL	O	Sub tray left rotation driving signal
19	LDOWN	O	Traverse mechanism down driving signal
20	LUP	O	Traverse mechanism up driving signal
21	INTP		
22	SCK	I	Serial communications clock input
23	TXD	O	Serial communications data output
24	RXD	I	Serial communications data input
25	AVSS	-	Connect to ground for A/D converter
26	T-IN	I	Tray close detection terminal (S83)
27	MUTE	O	Audio muting control signal output
28	T-OUT	I	Tray open detection terminal (S83)
29	PROINT	-	Not use
30	MUDSW	I	Traverse mechanism UP/DOWN switch detection terminal (S82)
31	CAMSW	I	Cam switch position detection terminal (S84)
32	KEY2	I	Operation switch input (S809,S810,S812~S816)
33	KEY1	I	Operation switch input (S801~S808)
34	AVDD	-	Power supply terminal (B5V)
35	AVREF	-	Power supply terminal
36	AVCO	O	AV Compulink output terminal
37	AVCI	I	AV Compulink input terminal
38	CS	I	Serial communications interrupt input
39	REMO	I	Remote control input
40	VSS	-	Connect to ground

Pin No.	Symbol	I/O	Description
41~45	NC	-	Non connect
46	VDD	-	Power supply terminal (B5V)
47	DCH	O	Disc change LED control signal output
48~54	DISC1~7	O	Disc number LED control signal output
55	ALED	O	DVD Audio LED control signal output
56	DDPLED	O	Digital direct progressive LED control signal output
57	PROGLED	O	Progressive LED control signal output
58	PONLED	O	Power ON LED control signal output
59	STLED	O	Standby LED control signal output
60~62	NC	-	Non connect
63~78	S24~S9	O	FL Segment control signal output
79	VLOAD	-	Connected to pull down resistor for FL driver
80~87	S8~S1	O	FL Segment control signal output
88~100	13G~1G	O	FL Grid control signal output

5.11 S-93C66AFJ-X (IC451, IC510) : EEPROM

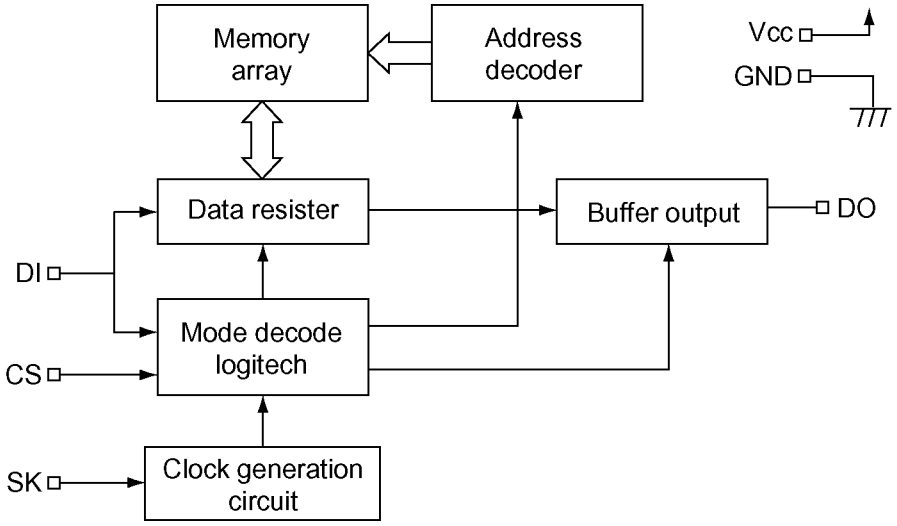
- Pin layout



- Pin function

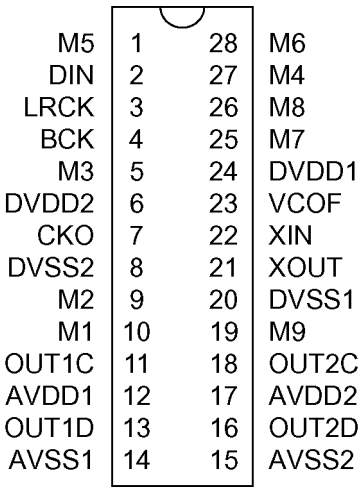
Pin No.	Symbol	I/O	Description
1	PE	-	Non connect
2	VCC	-	Power supply terminal
3	CS	I	Chip select input
4	SK	I	Serial clock input
5	DI	I	Serial data input
6	DO	O	Serial data output
7	GND	-	Connect to ground
8	NC	-	Non connect

- Block diagram



5.12 MN35505-X (IC753, IC763, IC773) : DAC

- Terminal layout

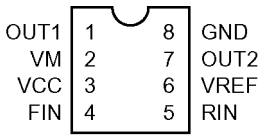

M5 1 28 M6
DIN 2 27 M4
LRCK 3 26 M8
BCK 4 25 M7
M3 5 24 DVDD1
DVDD2 6 23 VCOF
CKO 7 22 XIN
DVSS2 8 21 XOUT
M2 9 20 DVSS1
M1 10 19 M9
OUT1C 11 18 OUT2C
AVDD1 12 17 AVDD2
OUT1D 13 16 OUT2D
AVSS1 14 15 AVSS2

- Pin function

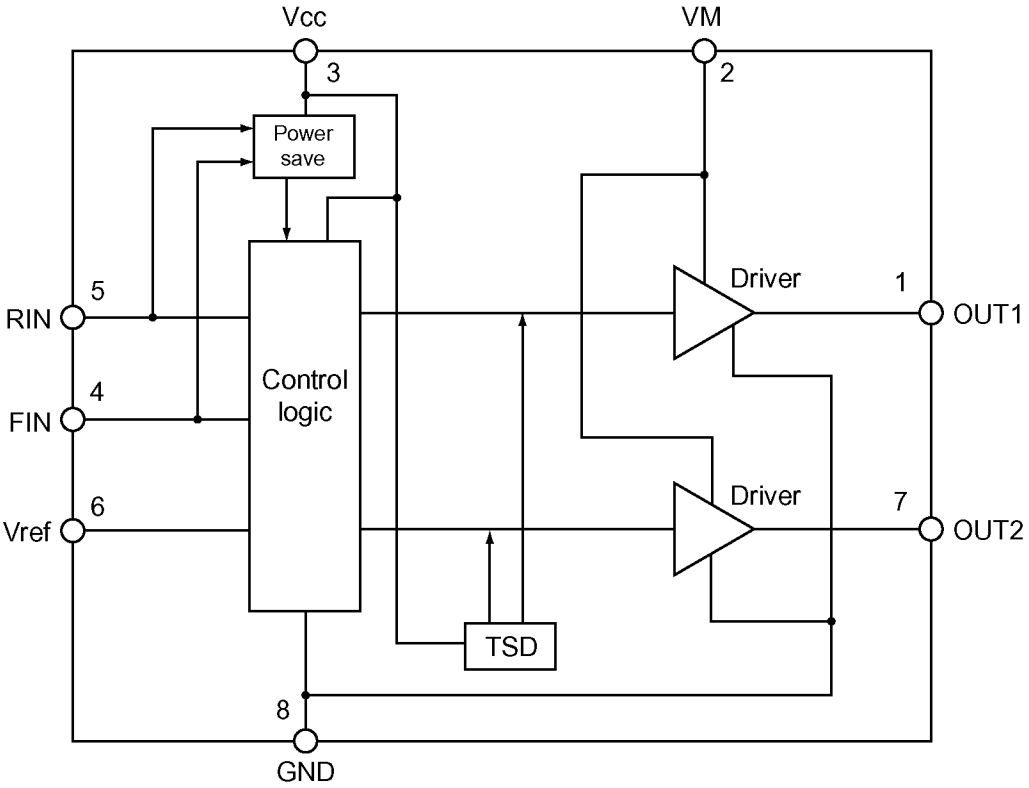
Pin No.	Symbol	I/O	Description
1	M5	I	Control signal for DAC
2	DIN	I	Digital data input
3	LRCK	I	L and R clock for DAC
4	BCK	I	Bit clock for DAC
5	M3	I	Control signal for DAC
6	DVDD2	-	Power supply terminal
7	CKO	-	Non connect
8	DVSS2	-	Connect to ground
9	M2	I	Control signal for DAC
10	M1	I	Control signal for DAC
11	OUT1C	O	Analog output 1
12	AVDD1	-	Power supply terminal
13	OUT1D	O	Analog output 1
14	AVSS1	-	Connect to ground
15	AVSS2	-	Connect to ground
16	OUT2D	O	Analog output 2
17	AVDD2	-	Power supply terminal
18	OUT2C	O	Analog output 2
19	M9	I	Control signal for DAC
20	DVSS1	-	Connect to ground
21	XOUT	-	Non connect
22	XIN	-	Non connect
23	VCOF	I	VCO Frequency
24	DVDD1	-	Power supply D+5V
25	M7	-	Connect to ground
26	M8	-	Connect to ground
27	M4	I	Control signal for DAC
28	M6	I	Clock for control signal

5.13 BA6287F-X(IC411,IC412):Motor driver

- Pin layout



- Block diagram



- Pin function

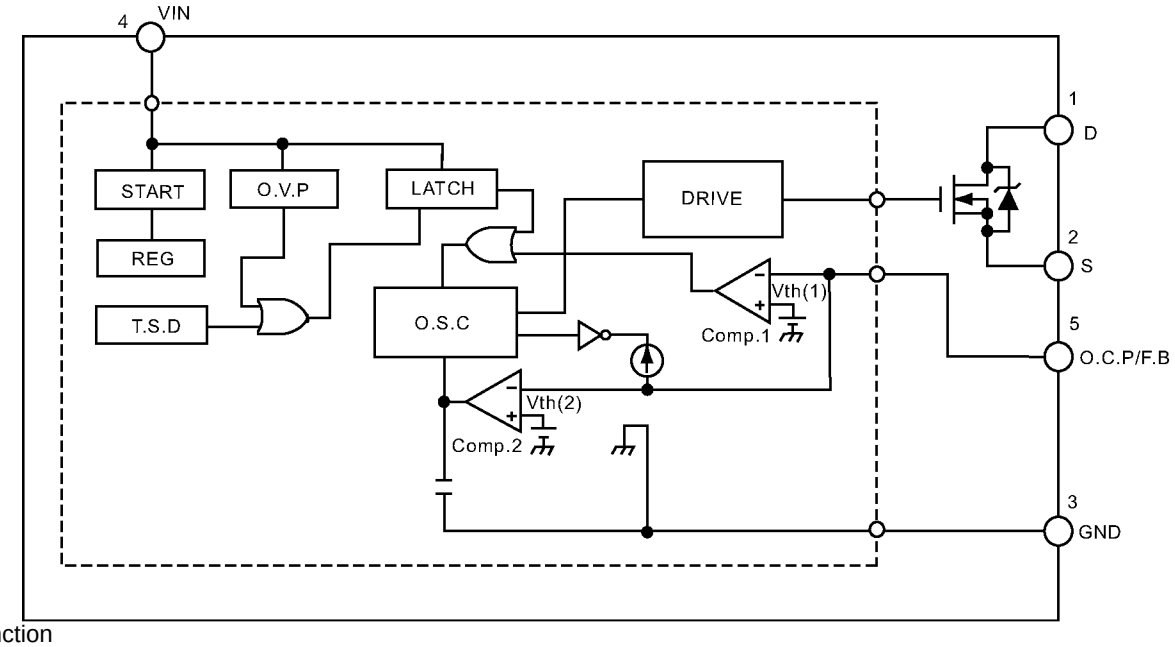
Pin No.	Symbol	I/O	Description
1	OUT1	O	Output for motor
2	VM	-	Power supply terminal for drive division
3	VCC	-	Power supply terminal for signal division
4	FIN	I	Input for control logic
5	RIN	I	Input for control logic
6	VREF	O	Output voltage level control
7	OUT2	O	Output for motor
8	GND	-	Connect to ground

- I/O Truth value table

FIN	RIN	OUT2	OUT1	MODE
H	L	L	H	Forward rotation mode
L	H	H	L	Reverse rotation mode
H	H	L	L	Break mode
L	L	OPEN	OPEN	Standby mode

5.14 STR-G6651 (IC901) : Switch regulator

- Block diagram



- Pin function

Pin No.	Symbol	Description	Function
1	D	Drain terminal	MOS FET drain
2	S	Source terminal	MOS FET source
3	GND	Ground terminal	Ground
4	Vin	Power supply terminal	Input of power supply for control circuit
5	O.C.P/F.B	Over current / Feedback terminal	Input of over current detection signal and constant voltage control signal

SECTION 6
Glossary of term and abbreviations(for AV Decoder section)

3D	3-dimension
A/V	1)audio/video 2)audio/visual
ac	alternating current
ACLK	audio serial-data (bit) clock
AD	multiplexed address / data bus
ADC	analog-to-digital converter
AIN	digital audio input
ALE	address latch enable
ANSI/SMPTE	American National Standards Institute / Society of Motion Pictures and Television Engineers
AOP	Audio Output Processor
AXCLK	test-mode audio-PLL clock output
baud	unit of signaling speed equal to one code element per second
Cb	blue color difference component (in accordance with the CCIR 601 specifications)
CCIR	Consultative Committee on International Radio
CD	compact disc
CD-DA	compact disc-digital audio
CMOS	Complementary Metal Oxide Semiconductor
CPU	Central Processing Unit
Cr	red color difference component (in accordance with the CCIR 601 specifications)
CSS	Content Scrambling System
CTS	Clear To Send
CVBS	Composite Video Blank and Sync
DAC	Digital-to-Analog Converter
dc	direct current
DEMUX	DEMUX Engine
DSP	Digital Signal Processing
DTS	Digital Theater System
DVD	Digital Versatile Disc
EAV	End Active Video
EAV/SAV	End Active Video / Start Active Video
EEI	Enable Error Interrupt
EEPROM	Electrically Erasable Programmable Read-Only Memory
FS	FIFO Status
GPIO	General Purpose Input/Output
HDCD	High Definition Compatible Digital
HDTV	High-Definition television
HSYNC	Horizontal sync
I/O	Input/Output
IEC	International Electrotechnical Commission
IOM	Current (I) Output Minus (complementary shared current path to Video DAC current paths)
IR	infrared
ITU	International Telecommunications Union
LA	Latched Address Bus
LCLK	oscillator clock (derived from internal crystal oscillator)
Lfe	Low-frequency effect
LRCLK	Left/Right clock
LSB	Least Significant Bit
Mb	Megabit
MB	Megabyte
MCLK	primary or master clock
MHz	Megahertz
MIPS	Million Instructions Per Second
MmCPU	Mediamatics CPU (synonym for internal RISC CPU)
MP3	Moving Picture Experts Group Layer-3 Audio (audio file format / extension)
MPEG1 audio	A digital audio format mainly used in video CDs. It is based on the moving picture expert group (MPEG1) format, a data compression technology.

MPEG1 audio	A digital audio format mainly used in Europe and Australia. It provides high quality, multi-channel audio of up to eight channels in the same was as Dolby Digital and DTS. It is based on the MPEG2 format, a data compression technology more improved than MPEG1
NOP	No Operation
NTSC	1)National Television System Committee 2)Worldwide video standard in North America and Japan
NTSC-M	Version of NTSC used in certain parts of the world (Brazil)
OSD	On-screen display
PAL	Phase alteration by line
PCM	Pulse Code Modulation
PCMCLK	PCM audio-data over-sampling clock
PCS	1)Picture Control and Size 2)Perpheral Chip Select
PLL	Phase Lock Loop
PQFP	Plastic Quad Flat Pack (Package)
PWM	Pulse Width Modulator
r/w	Read/Write access
RAM	Random Access Memory
RGB	Red-Green-Blue (color model)
RISC	Reduced Instruction Set Computer
ROM	Read-Only Memory
RXD	Receive signal
RW	Readable / Write able
SAV	Start Active Video
SCART	Syndicat des Constructeurs d'Appareils Radiorecepteurs et Televiseurs (connector used in Europe to connect many kinds of audiovisual equipment)
SCLK	Secondary or slave clock
SDRAM	Synchronous Dynamic Random Access Memory
S/PDIF	Sony / Philips Digital Interface
S/PDIFCLK	clock associated with the S/PDIF output
SRAM	Static Random Access Memory
SSP	Synchronous Serial Port
TXD	transmit signal
UART	Universal Asynchronous Receiver-transmitter
USART	Universal Synchronous / Asynchronous Receiver / Transmitter
VGA	Video Graphics Array
VIO	Video Input / Output
VREF	Voltage REFerence
Vref	Vertical reference
VSSA	quiet analog ground
VSYNC	Vertical sync
XBUS	External peripheral bus
XIO	External Input / Output
Y	Luminance component (in accordance with the CCIR 601 specifications)
YCbCr	Luminance component, blue color difference component, red color difference component (in accordance with the CCIR 601 specifications)

JVC

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PERSONAL & MOBILE NETWORK BUSINESS UNIT
1644, Shimotsuruma, Yamato, Kanagawa 242-8514, Japan

200208

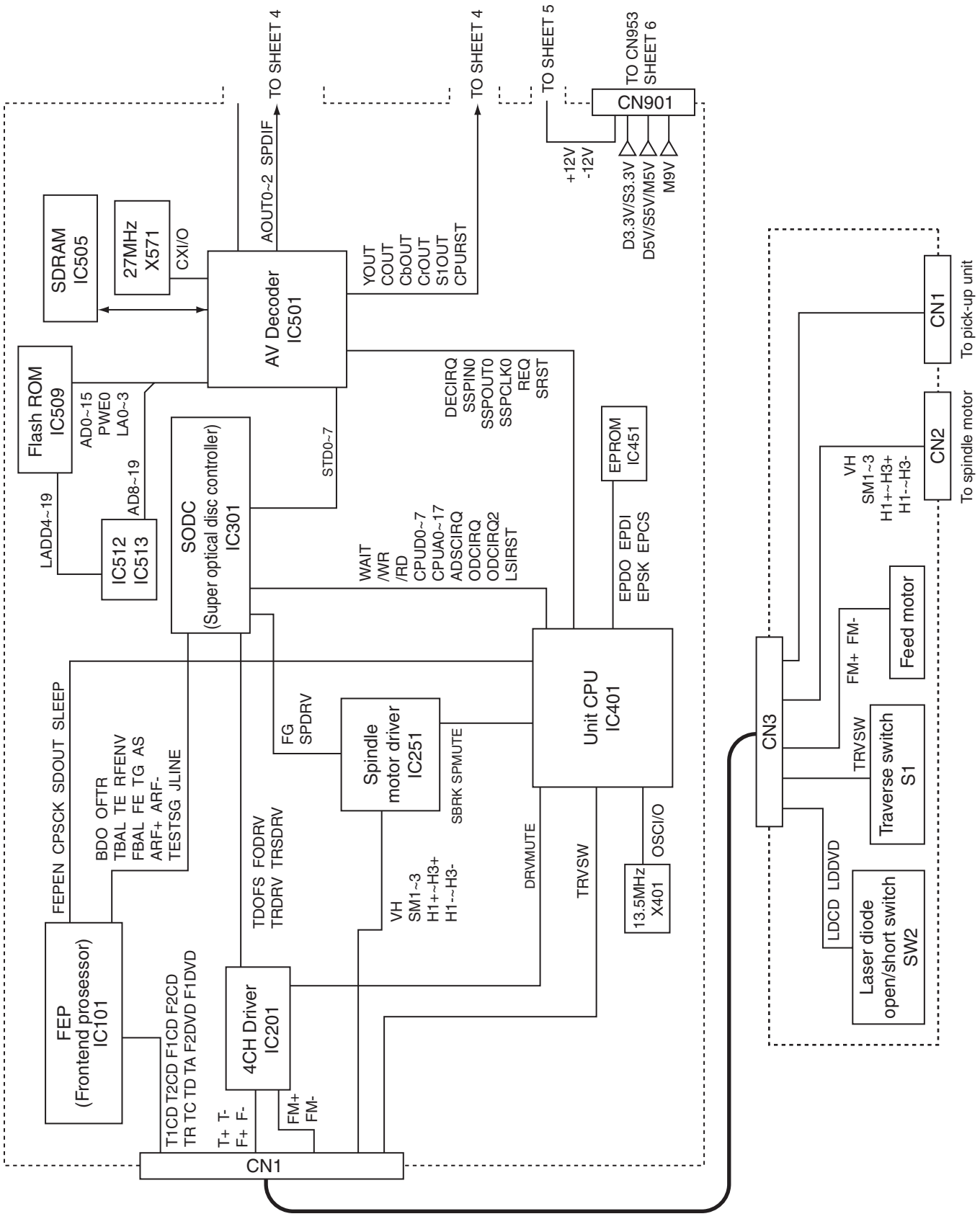
No.A0034

Safety precaution

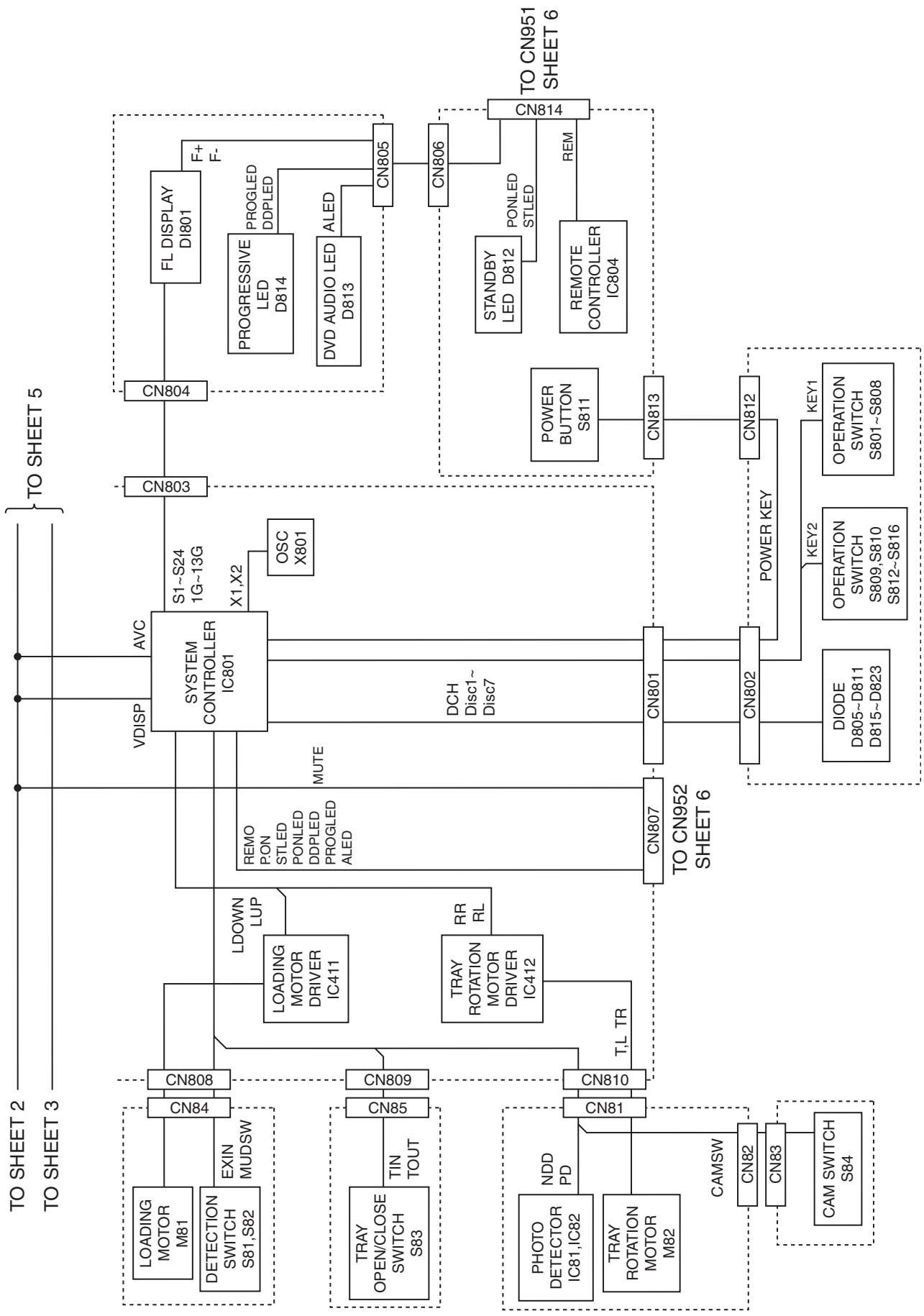
In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.
When replacing them, be sure to use the parts of the same type and rating as specified by the manufacturer. (Except the JC version)

Block diagrams

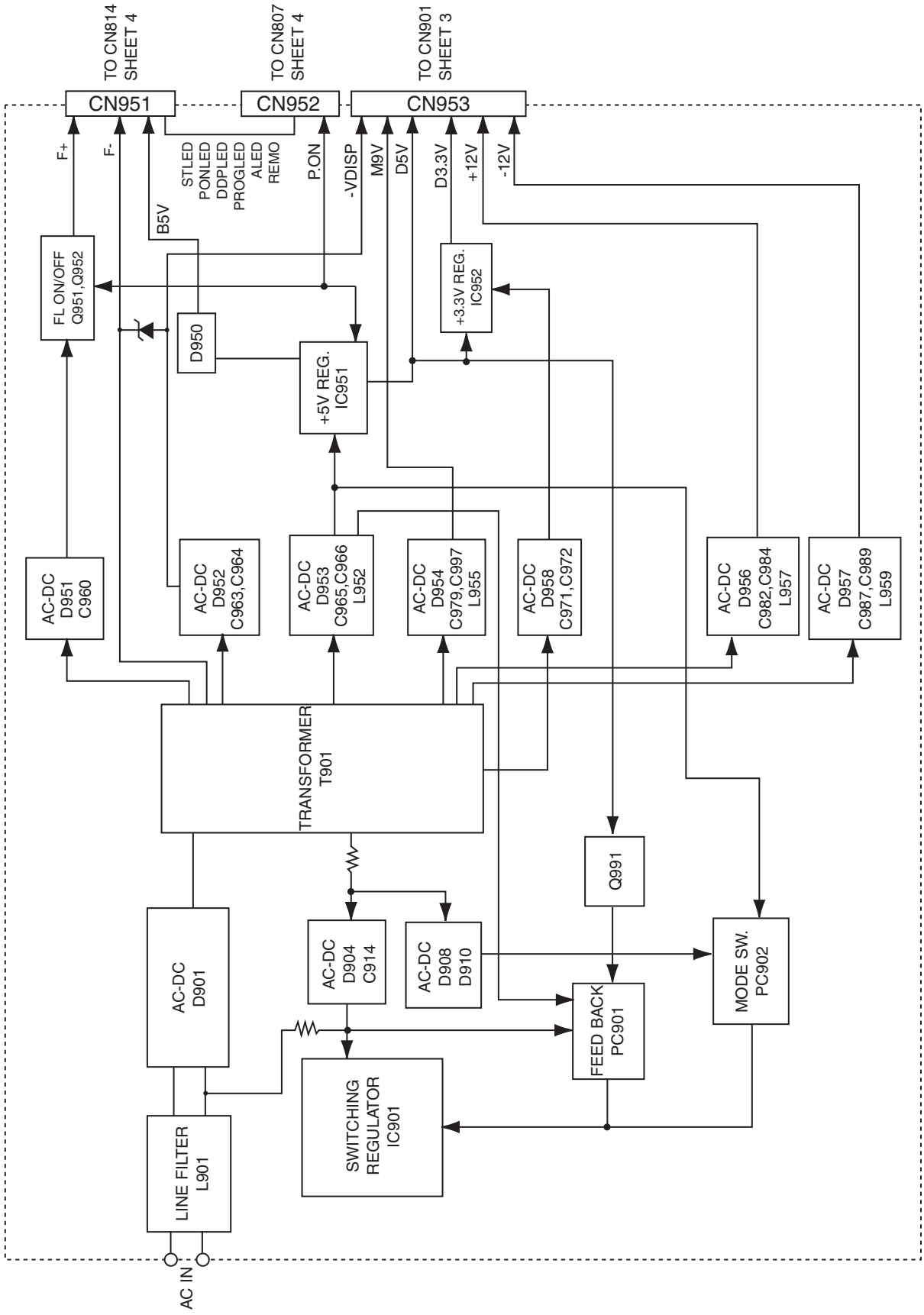
■ DVD Servo control & AV decoder section (SHEET 1,2,3)



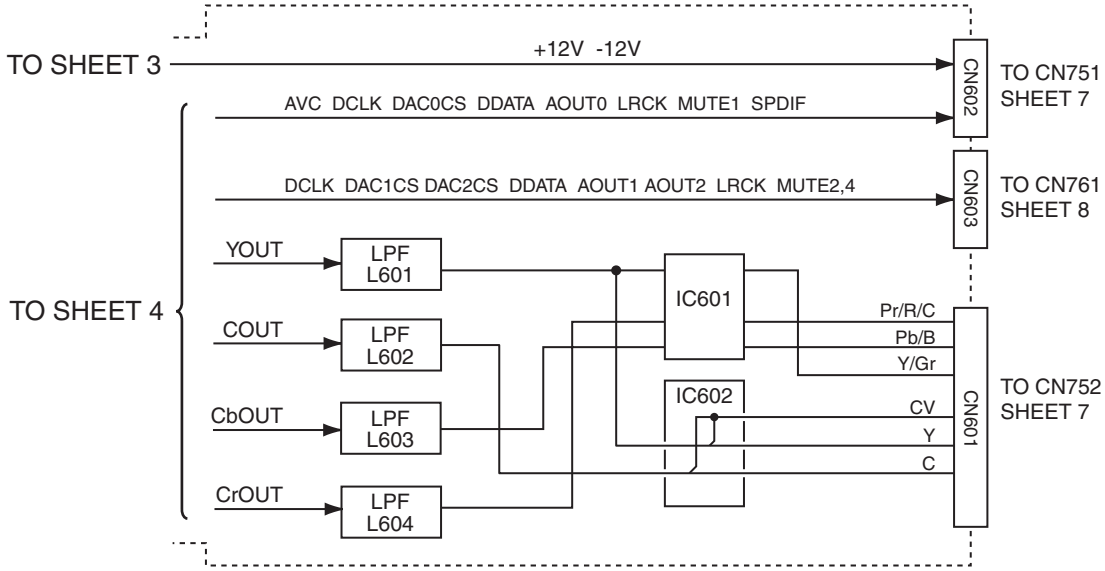
■ FL Display & system control section (SHEET 4)



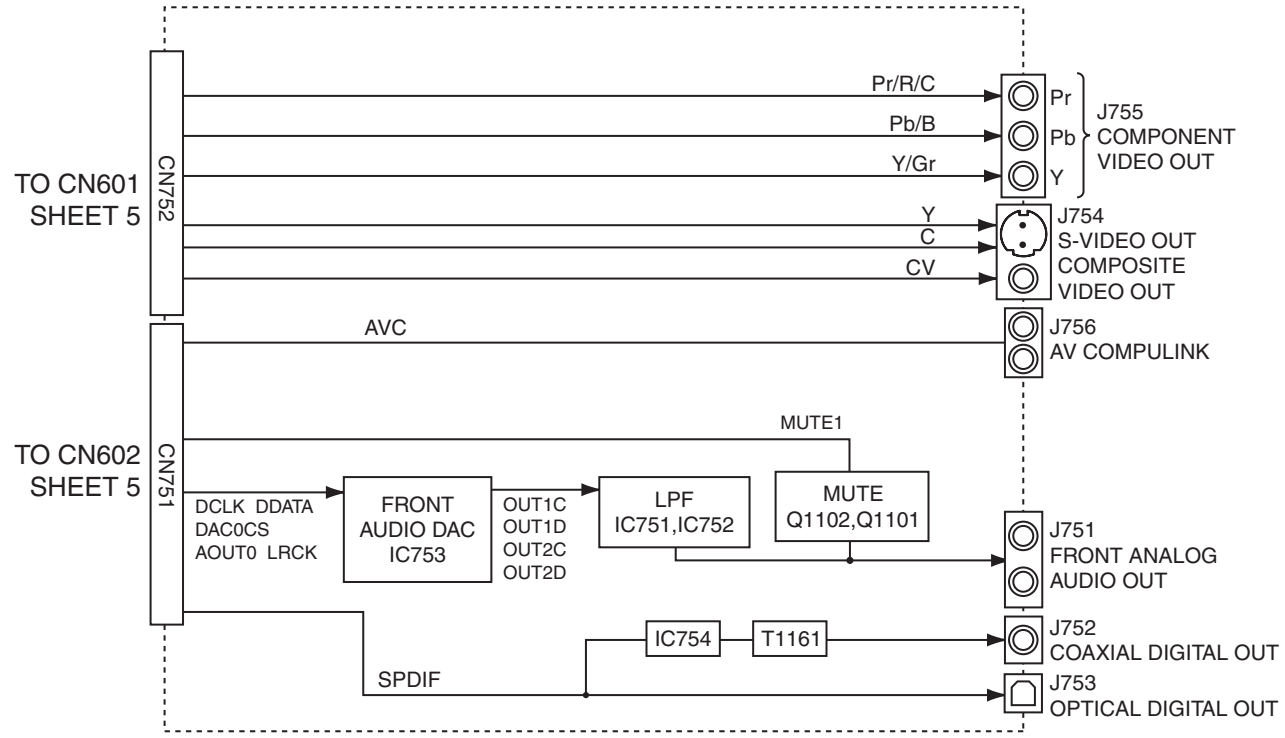
■ Power supply section (SHEET 6)



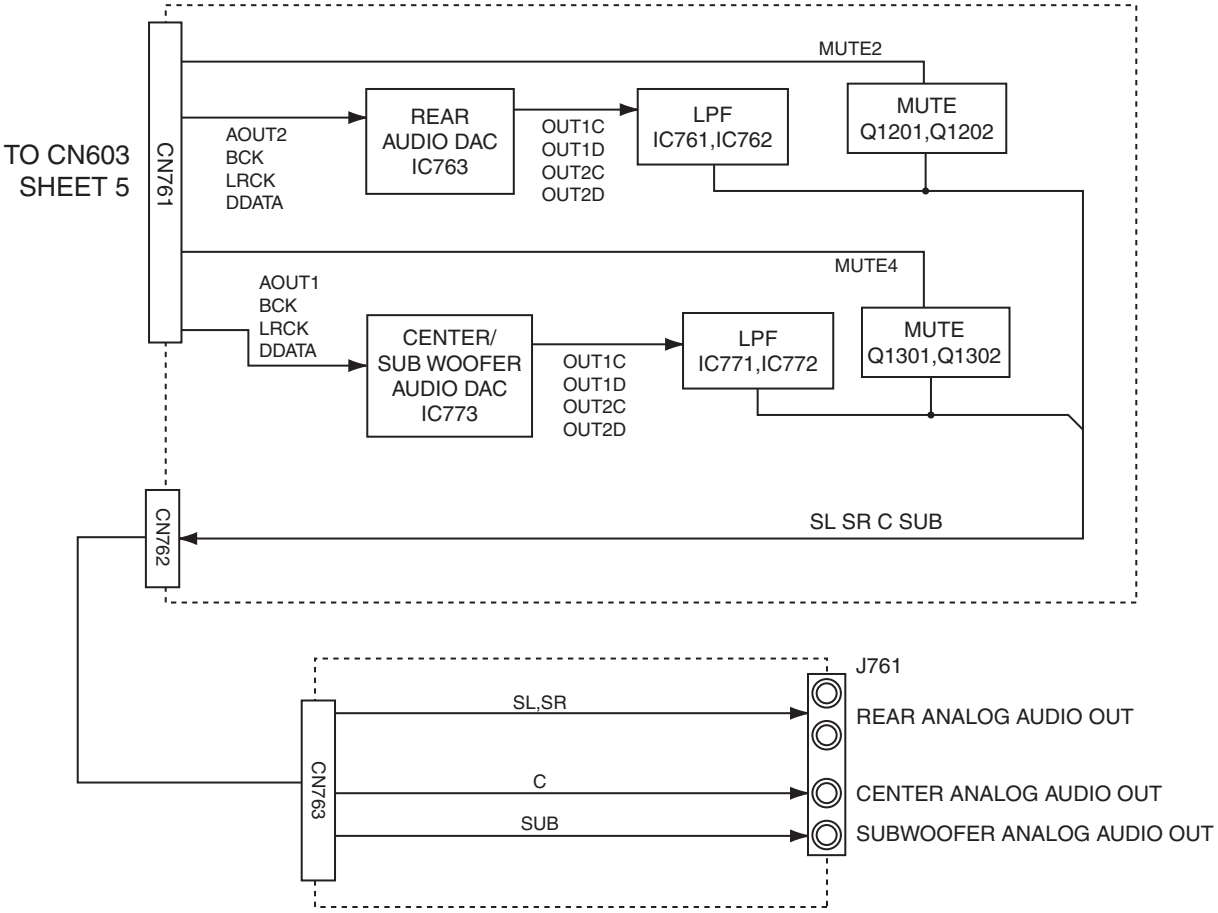
■ Video signal driver section (SHEET 5)



■ AUDIO/VIDEO Signal output section (SHEET 7)

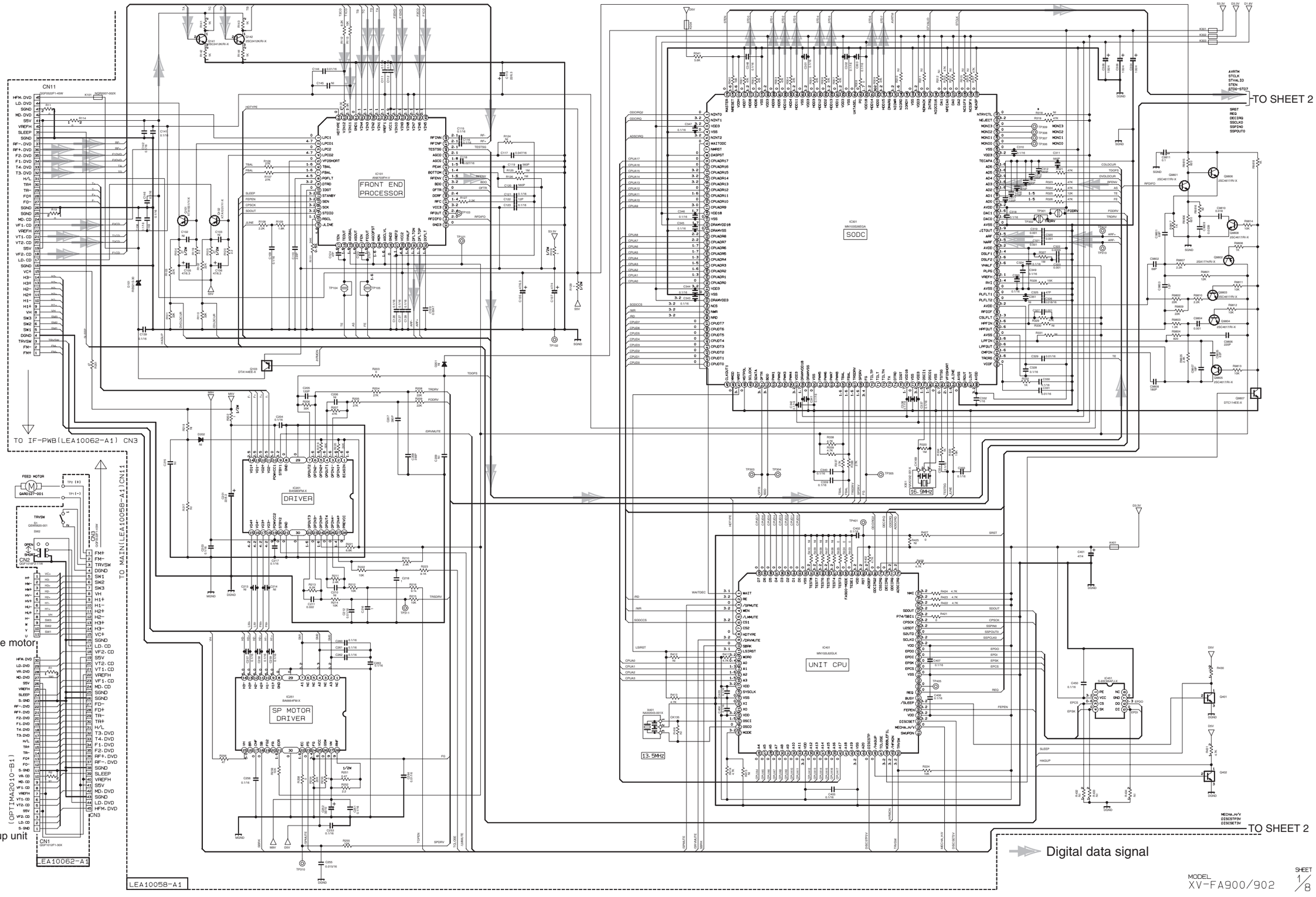


■ Surround audio signal output section (SHEET 8)

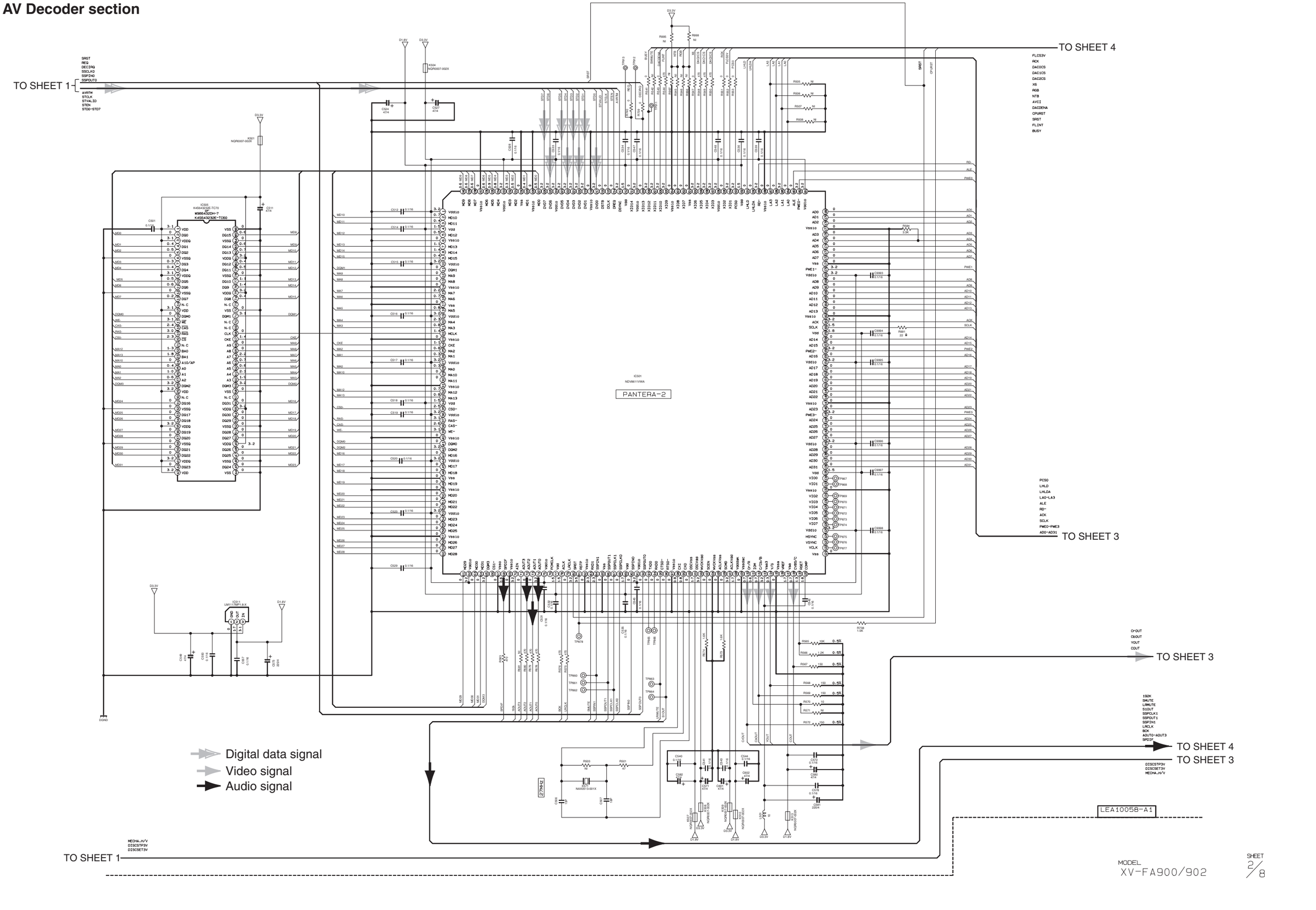


Standard schematic diagrams

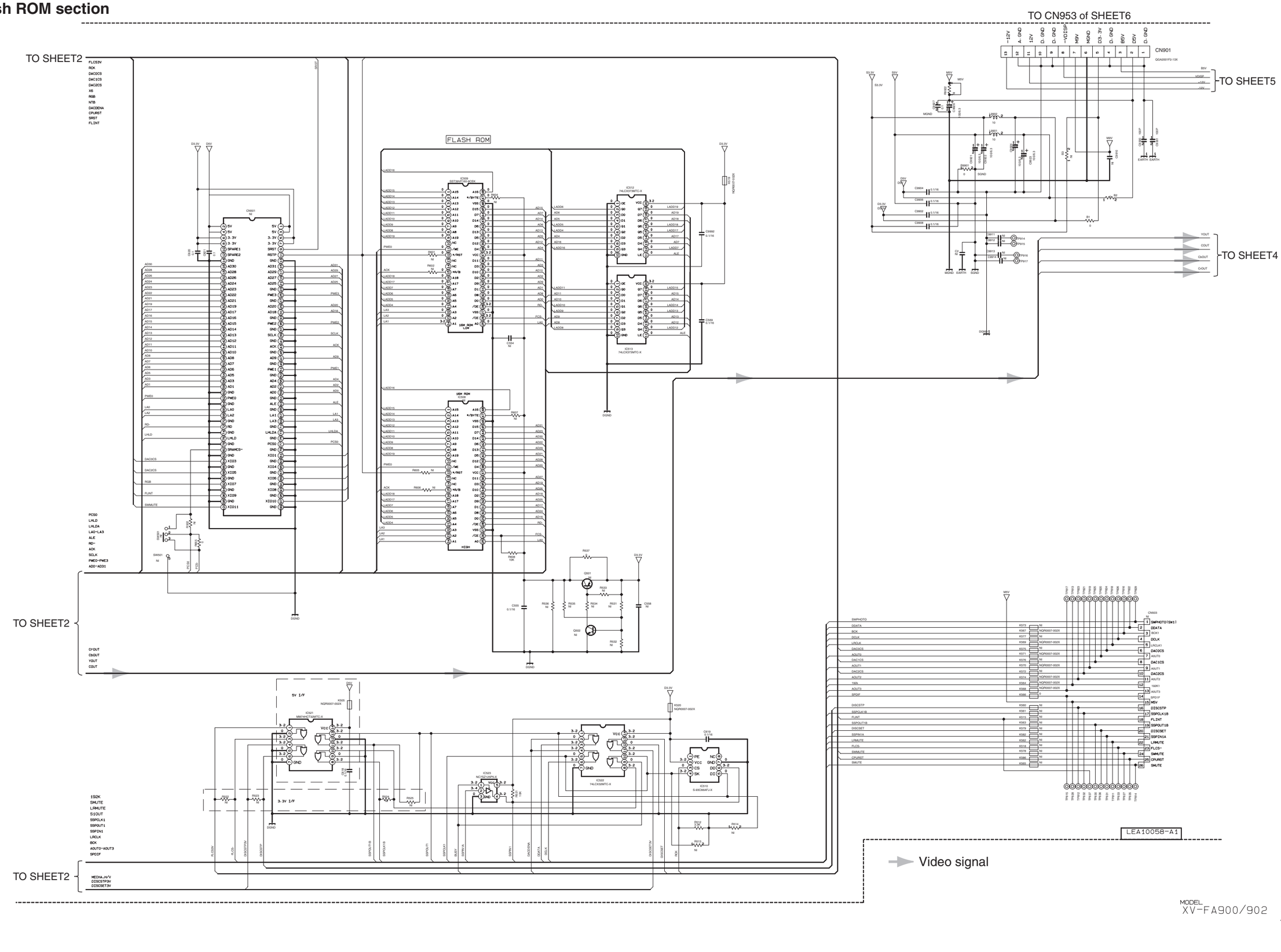
■Frontend & servo control section



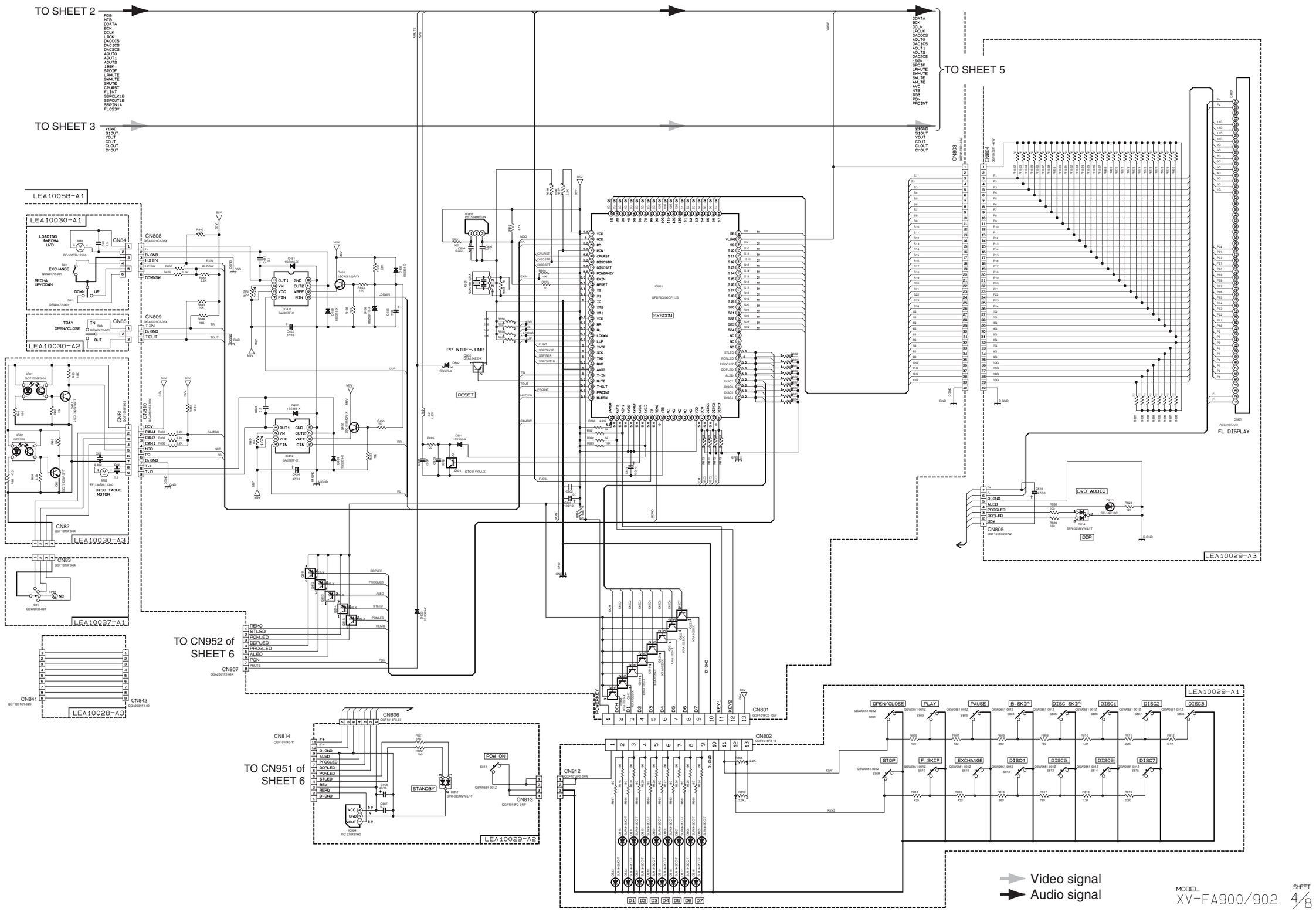
■ AV Decoder section



■ Flash ROM section

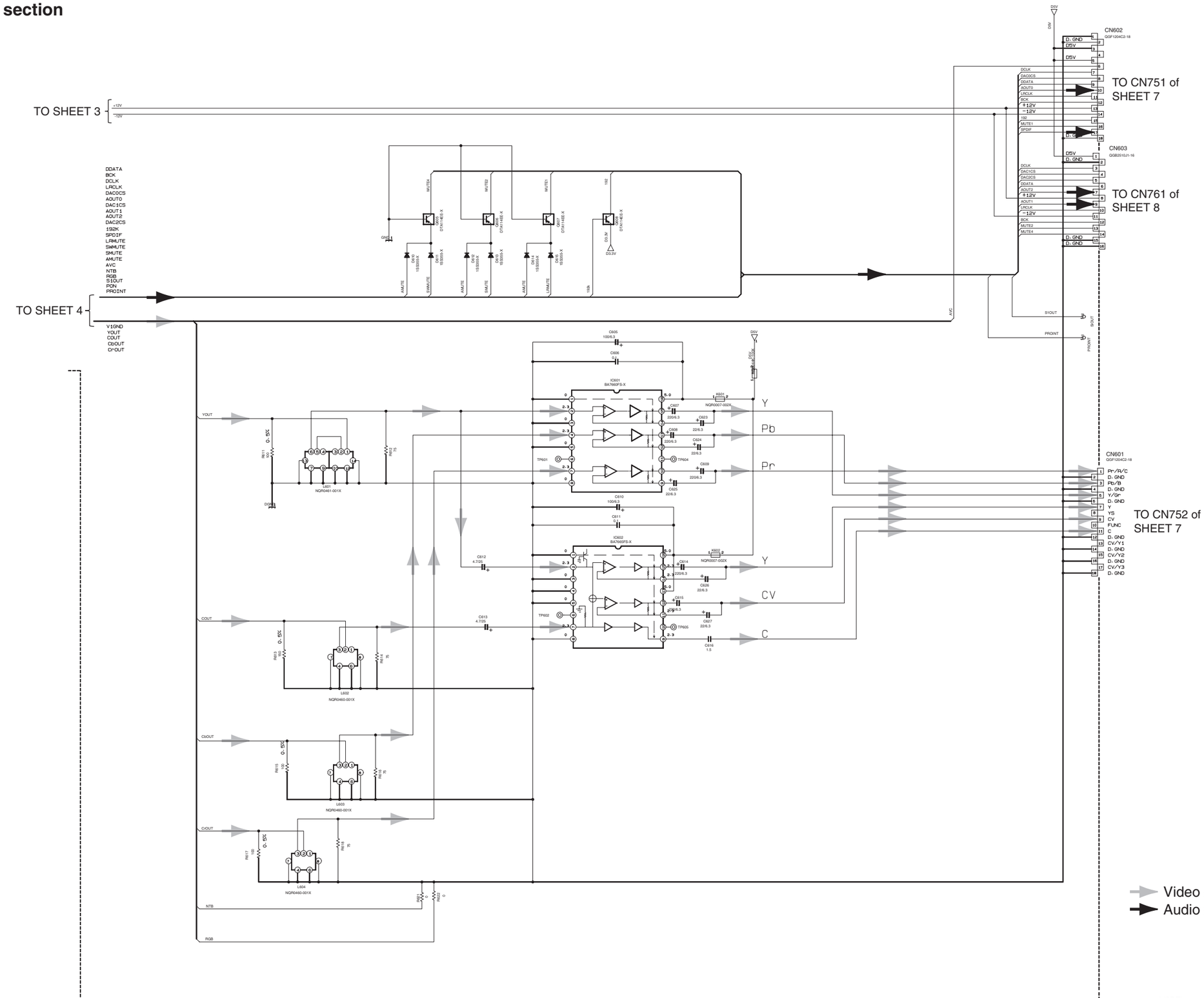


■ FL Display & system control section



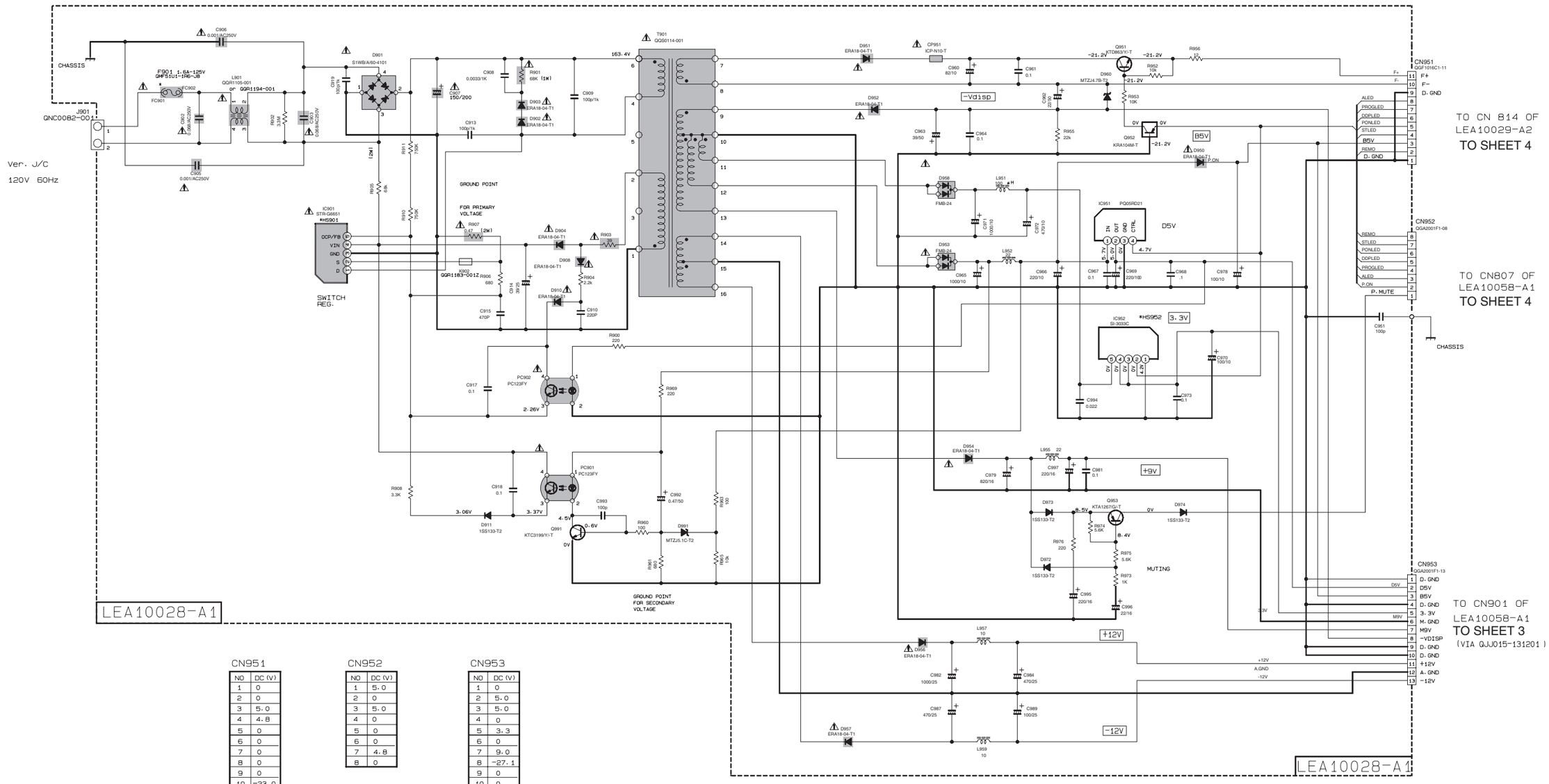
MODEL XV-FA900/902 SHEET 4/8

■ Video signal driver section



MODEL XV-FA900/902 SHEET 5/8

■ Power supply section



CN951

NO	DC (V)
1	0
2	0
3	5.0
4	4.8
5	0
6	0
7	0
8	0
9	0
10	-23.0
11	-18.8

CN952

NO	DC (V)
1	5.0
2	0
3	5.0
4	0
5	0
6	0
7	4.8
8	0

CN953

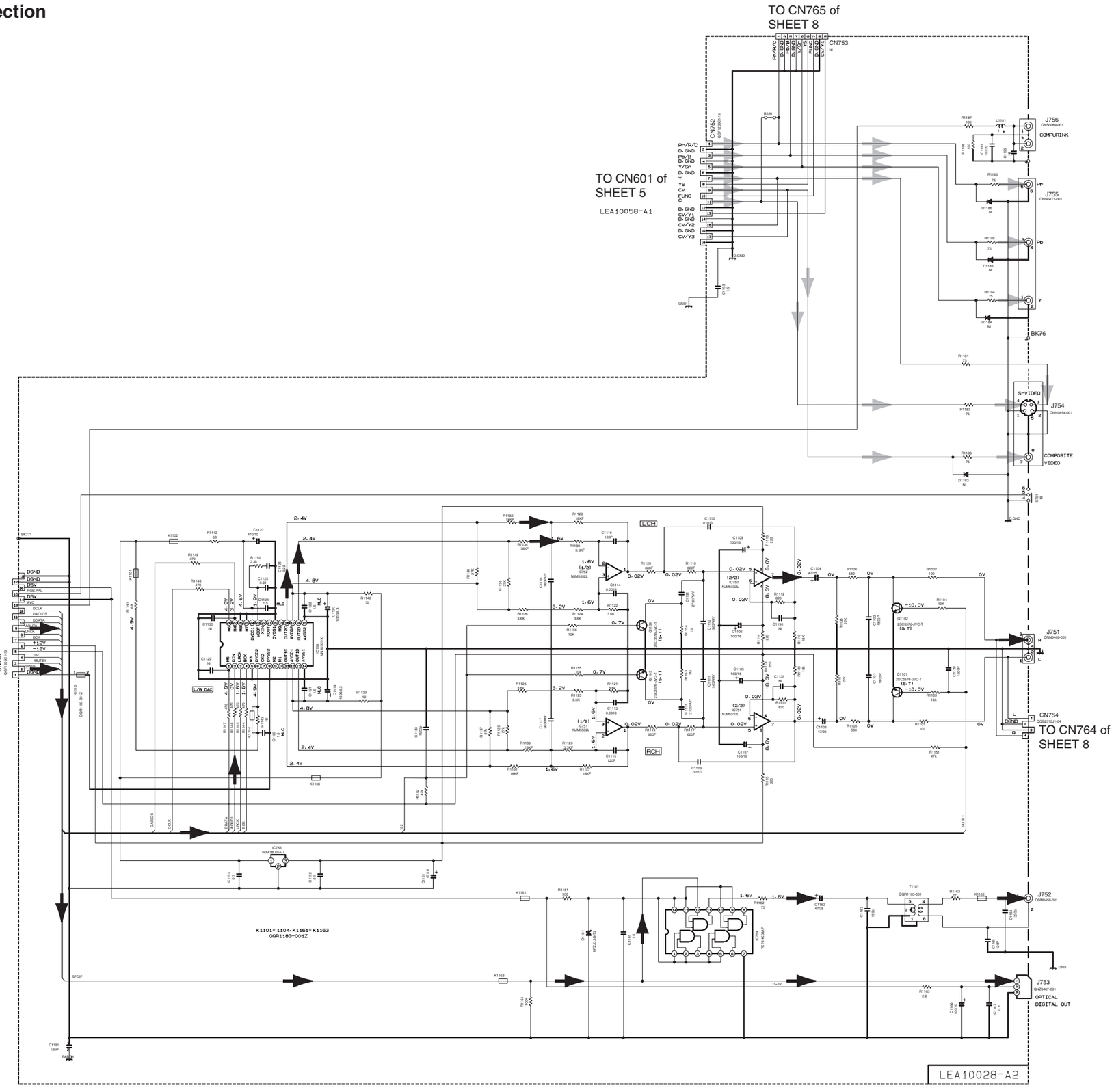
NO	DC (V)
1	0
2	5.0
3	5.0
4	0
5	3.3
6	0
7	9.0
8	-27.1
9	0
10	0
11	12.8
12	0
13	-12.0

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

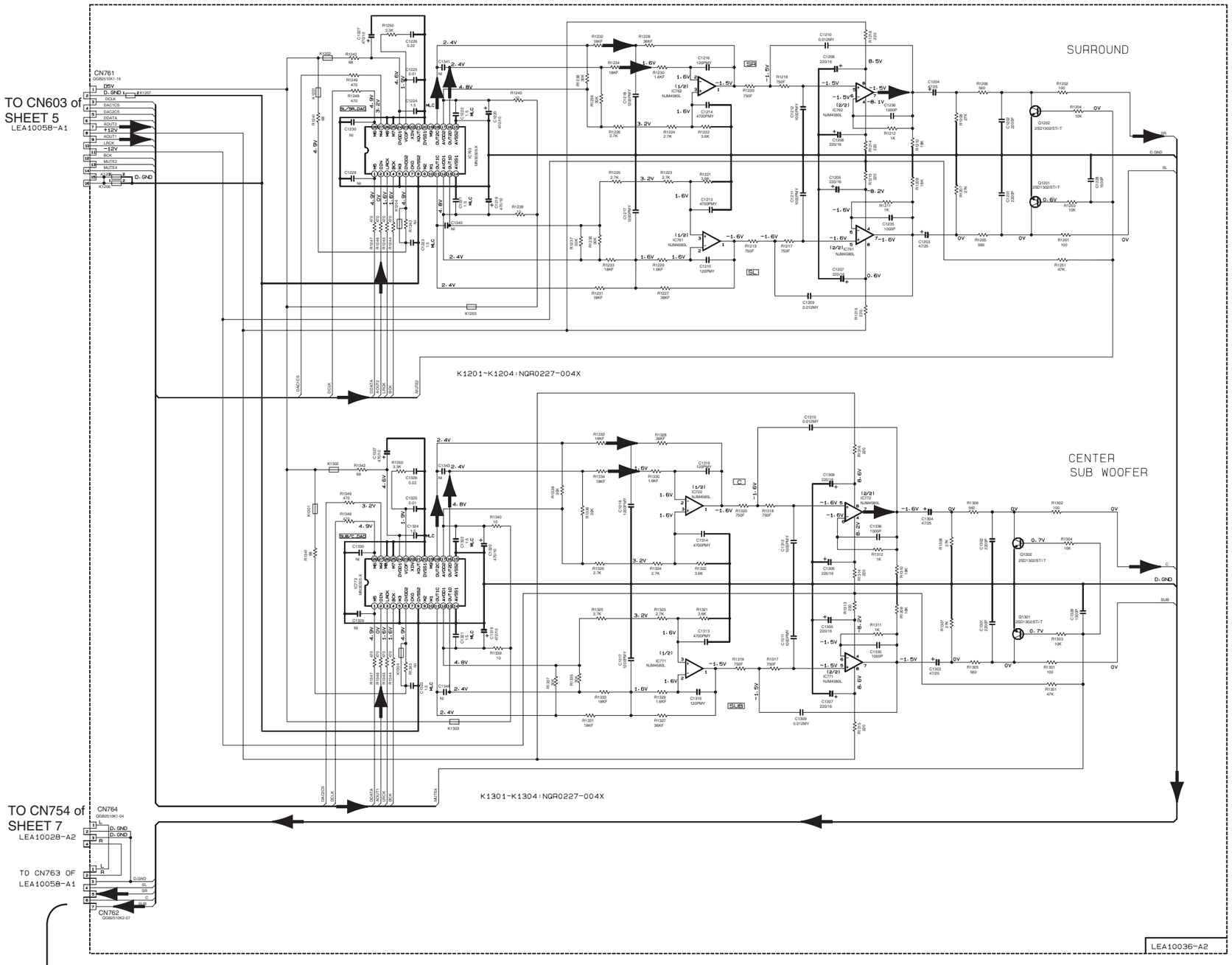
MODEL XV-FA900/902

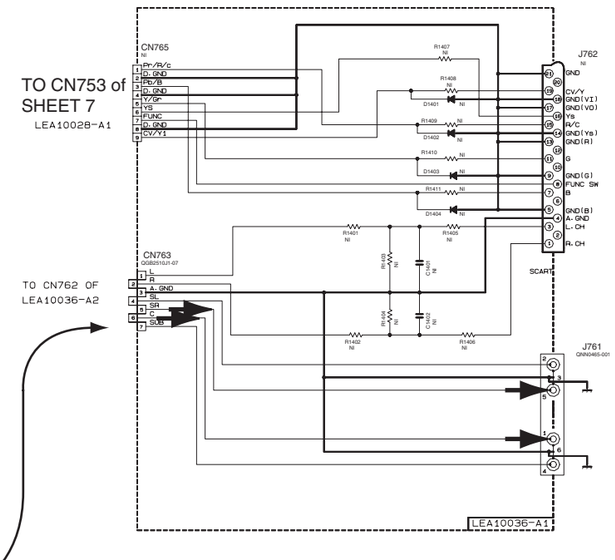
SHEET 6/8

■ Audio / video signal output section



■ Surround audio signal output section

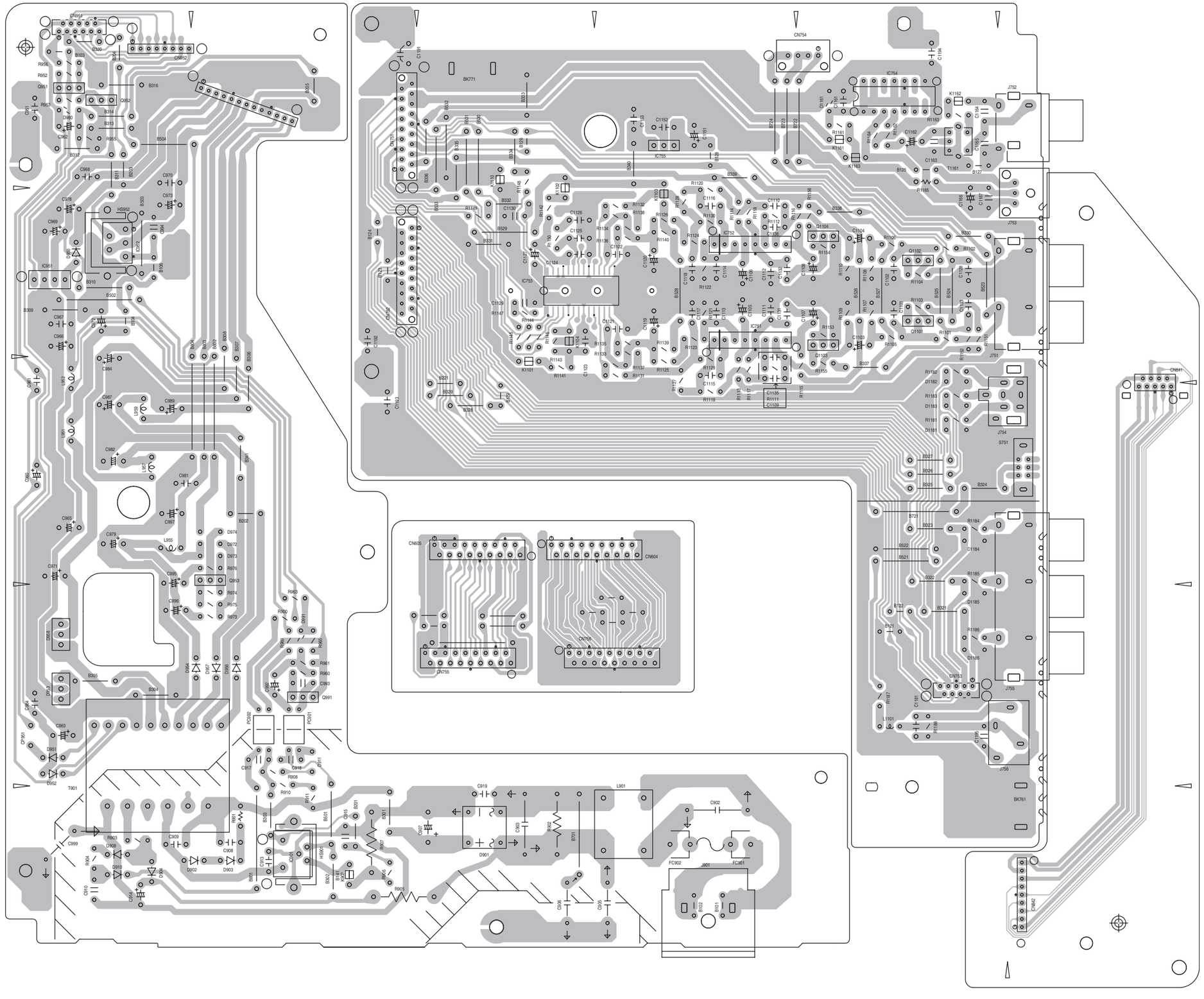




→ Audio signal

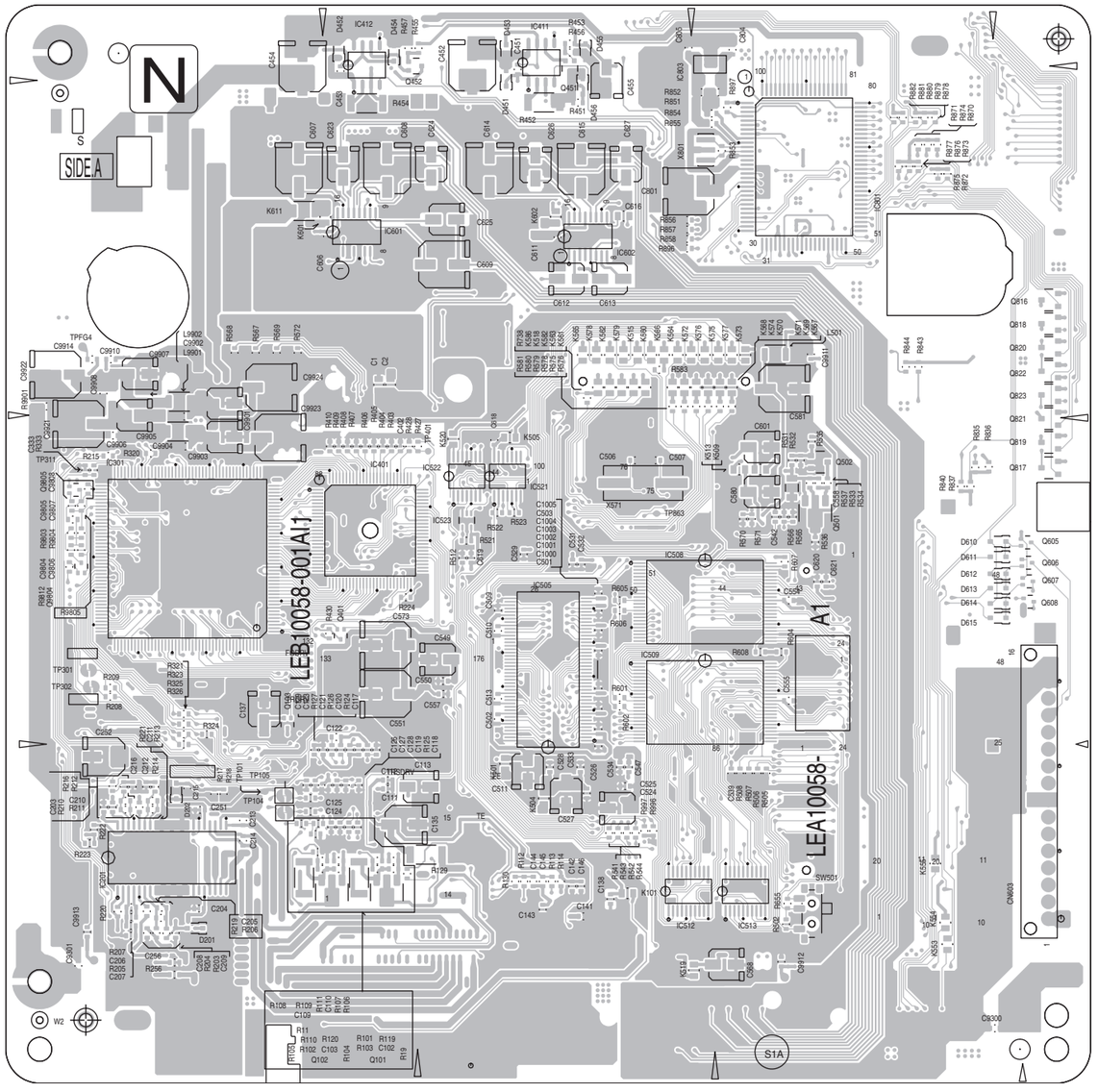
Printed circuit boards

■ Main board

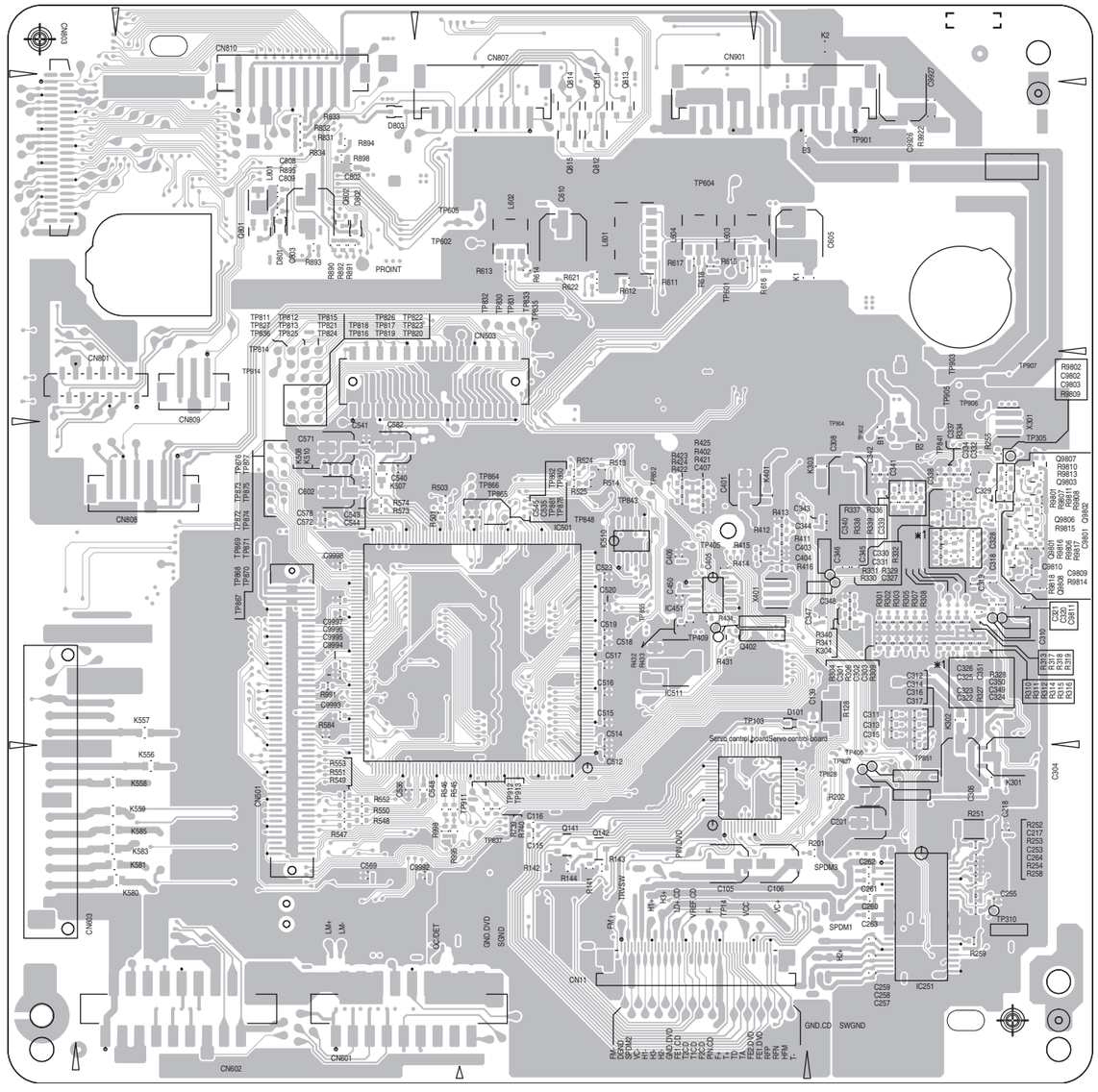


■Servo control board

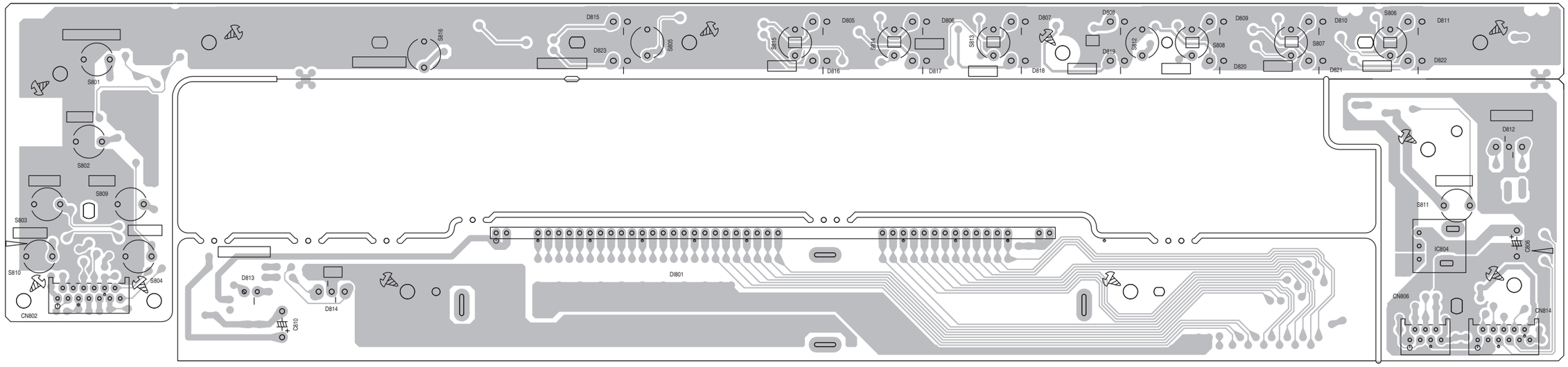
Forward side



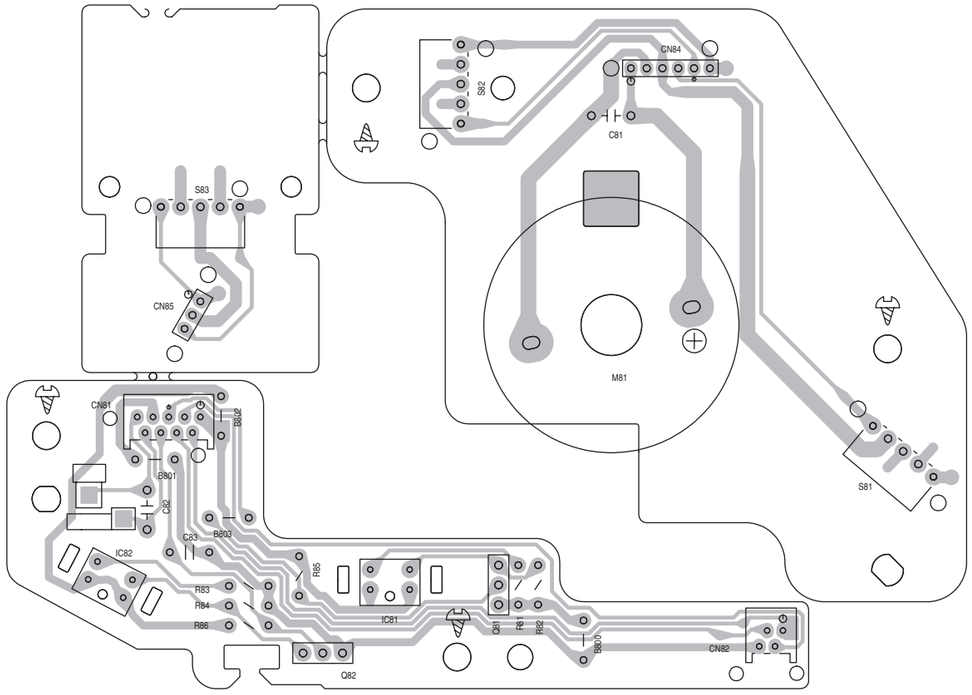
Reverse side



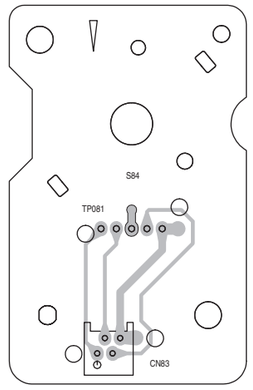
■ Operation switch & FL display board



■ Loading motor & detection switch board

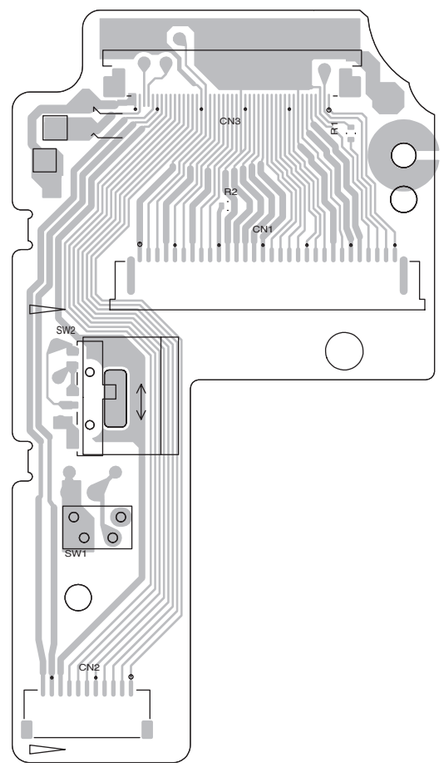


■ Cam switch board

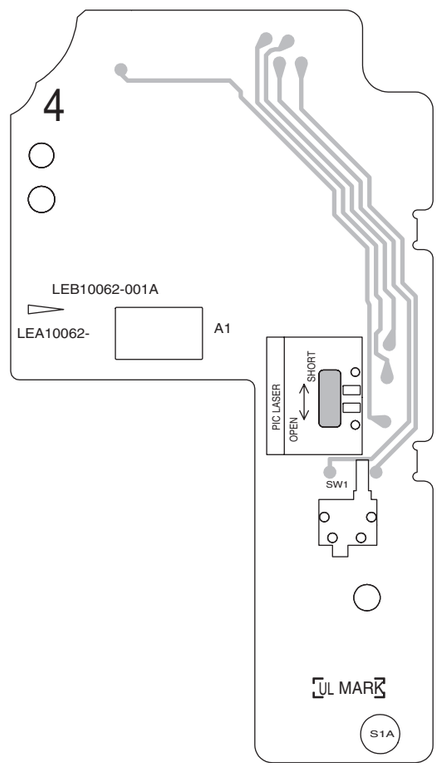


■ Relay board

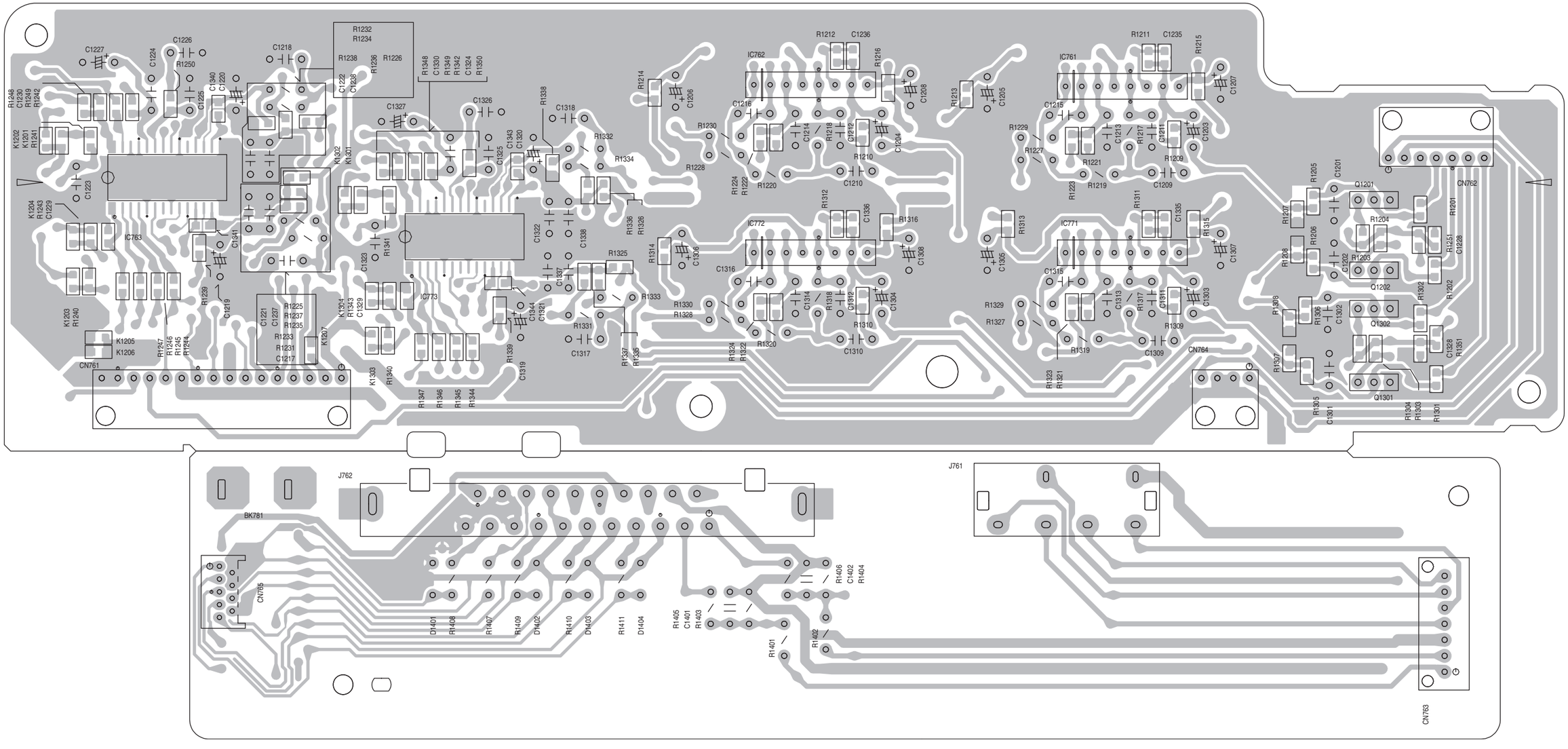
Reverse side



Forward side



■Surround audio board



PARTS LIST

[XV-FA900BK/XV-FA902SL]

* All printed circuit boards and its assemblies are not available as service parts.

Area Suffix

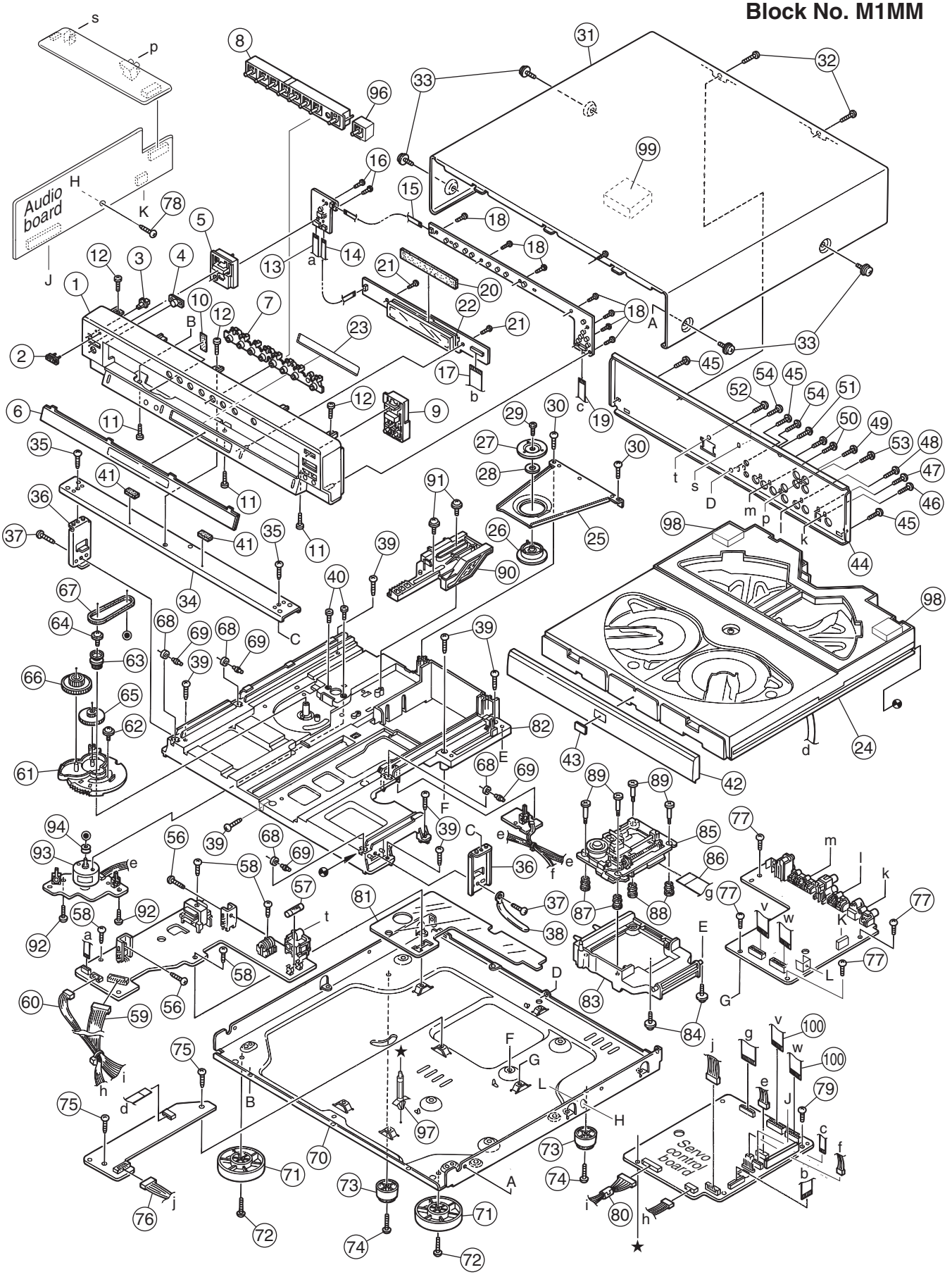
J ---------- U.S.A.

- Contents -

Exploded view of general assembly and parts list ---------- 3-2
Tray mechanism assembly and parts list ---------- 3-6
Traverse mechanism assembly and parts list ---------- 3-8
Grease points ---------- 3-10
Electrical parts list ---------- 3-19
Packing materials and accessories parts list ---------- 3-30

Exploded view of general assembly and parts list

Block No. M1MM



■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LE10258-012A	FRONT PANEL	1		BK
		LE10258-013A	FRONT PANEL	1		SL
	2	VJD5429-001SS	JVC MARK	1		BK
		VJD5429-002SS	JVC MARK	1		SL
	3	LE30961-001A	INDICATOR	1	POWER	
	4	E408131-002	REMOTE LENS	1		BK
		E408131-001	REMOTE LENS	1		SL
	5	LE20600-001A	PUSH BUTTON	1	POWER	BK
		LE20600-002A	PUSH BUTTON	1	POWER	SL
	6	LE20599-013A	WINDOW SCREEN	1		
	7	LE30962-002A	INDICATOR	1	DISC	
	8	LE20601-007A	PUSH BUTTON	1	DISC	BK
		LE20601-008A	PUSH BUTTON	1	DISC	SL
	9	LE20602-001A	PUSH BUTTON	1	PLAY	BK
		LE20602-002A	PUSH BUTTON	1	PLAY	SL
	10	E306805-110	SPACER	1	F.PANEL	
	11	QYSDSG3008M	SCREW	3	BOTTOM	BK
		QYSDSG3008N	T.SCREW	3	BOTTOM	SL
	12	QYSDSG3008M	SCREW	3	TOP	BK
		QYSDSG3008N	T.SCREW	3	TOP	SL
	13	QUQ110-1124AJ	FFC WIRE	1	TO 10028-A1	
	14	QUQ110-0711BJ	FFC WIRE	1	TO 10029-A2	
	15	QUQ110-0410AJ	FFC WIRE	1	TO 10029-A2	
	16	QYSBSF2608Z	T.SCREW	2	SW CB	
	17	QUQ105-4026AJ	FFC WIRE	1	TO 10038-A1	
	18	QYSBSF2608Z	T.SCREW	7	PLAY SW CB	
	19	QUQ110-1320AJ	FFC WIRE	1	TO 10038-A1	
	20	E306805-014	FELT SPACER	1		
	21	QYSBSF2608Z	T.SCREW	2	FL CB	
	22	LE30960-002A	FL HOLDER	1		
	23	LE40759-002A	FL SCREEN	1		
	24	----------	TRAY MECHANISM	1	See 3-6 page	
	25	LV32740-001A	CLAMPER BASE	1		
	26	LV32417-001A	CLAMPER	1		
	27	LV42089-002A	YOKE	1		
	28	LV41118-003A	MAGNET	1		
	29	LV41741-001A	SPECIAL SCREW	1		
	30	QYSBSF3008Z	SCREW	2	CLAMPER	
	31	LE20596-001A/S/	METAL COVER	1		BK
		LE20596-002A/S/	METAL COVER	1		SL
	32	QYSBSGY3008E	T.SCREW	2	M.COVER	
	33	E406308-003	SPECIAL SCREW	4	M.COVER	BK
		E406308-004	SPECIAL SCREW	4	M.COVER	SL
	34	LE20598-001A	MECHA FRAME	1		
	35	QYSBSG3008Z	T.SCREW	2	M.FRAME	
	36	LE30959-002A	STAY BRACKET	2		
	37	QYSBSF3008Z	SCREW	2	STAY BKT	

■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	38	VKZ4001-110S	WIRE HOLDER	1		
	39	QYSBSG3008Z	T.SCREW	7	CHASSIS	
	40	QYSDSP2604Z	SCREW	2	LOAD.MOTOR	
	41	LV30225-028A	SPACER	2	M.FRAME	
	42	LE10259-013A	FITTING	1		BK
		LE10259-014A	FITTING	1		SL
	43	LV41565-002A	MARK	1		BK
		LV41565-001A	MARK	1		SL
	44	LE20597-017A	REAR PANEL	1		BK
		LE20597-018A	REAR PANEL	1		SL
	45	QYSBSGY3008M	SPECIAL SCREW	3	REAR+CHASSIS	
	46	QYSBSGY3008M	SPECIAL SCREW	1	COAXIAL	
	47	QYSBSGY3008M	SPECIAL SCREW	1	OPTICAL	
	48	QYSBSGY3008M	SPECIAL SCREW	1	AUDIO OUT	
	49	QYSBSGY3008M	SPECIAL SCREW	1	S-VIDEO	
	50	QYSBSGY3008M	SPECIAL SCREW	2	VIDEO OUT	
	51	QYSBSGY3008M	SPECIAL SCREW	1	COMPULINK	
	52	QYSBSGY3008M	SPECIAL SCREW	1	AC INLET	
	53	QYSBSGY3008M	SPECIAL SCREW	1	AUDIO OUT	
	54	QYSBSGY3008M	SPECIAL SCREW	2	GND	
	56	QYSBSG3008Z	T.SCREW	2		
⚠	57	QMF51U1-1R6-J8	FUSE	1	J,C	
	58	QYSBSG3006E	T.SCREW	4	POWER CB	
	59	QJJ015-133203	SIN CR C-C WIRE	1		
	60	QJA003-084203	SIN CR C-C WIRE	1		
	61	LV21034-001A	LOAD.BASE	1		
	62	E65923-003	TAPPING SCREW	1	LOAD BASE	
	63	LV32737-001A	L.PULLEY GEAR	1		
	64	E65923-003	TAPPING SCREW	1	L.PULLEY GEAR	
	65	LV32738-001A	LOAD.GEAR(1)	1		
	66	LV32739-001A	LOAD.GEAR(2)	1		
	67	LV42341-001A	LOAD.BELT	1		
	68	E407149-001SS	RUBBER TUBE	4		
	69	E407140-001SS	C.D ROLLER	4		
	70	LE10257-004A	CHASSIS BASE	1		
	71	LE30967-001A	FOOT	2	FRONT	BK
		LE30967-002A	FOOT	2	FRONT	SL
	72	QYSBST3010Z	T.SCREW	2	FRONT FOOT	
	73	E47227-045	FOOT ASSY	2	REAR	
	74	QYSBST3010Z	T.SCREW	2	REAR FOOT	
	75	QYSBSG3006E	T.SCREW	2		
	76	QJA003-091804	SIN CR C-C WIRE	1		
	77	QYSBSG3006E	T.SCREW	4		
	78	QYSBSG3006E	T.SCREW	1	AUDIO CB	
	79	QYSBSG3006E	T.SCREW	1	SERVO CB	
	80	QQR1267-001	FERRITE CORE	1		
	81	LE30966-001A	PROTECT SHEET	1		
	82	LV10529-002A	CHASSIS	1		

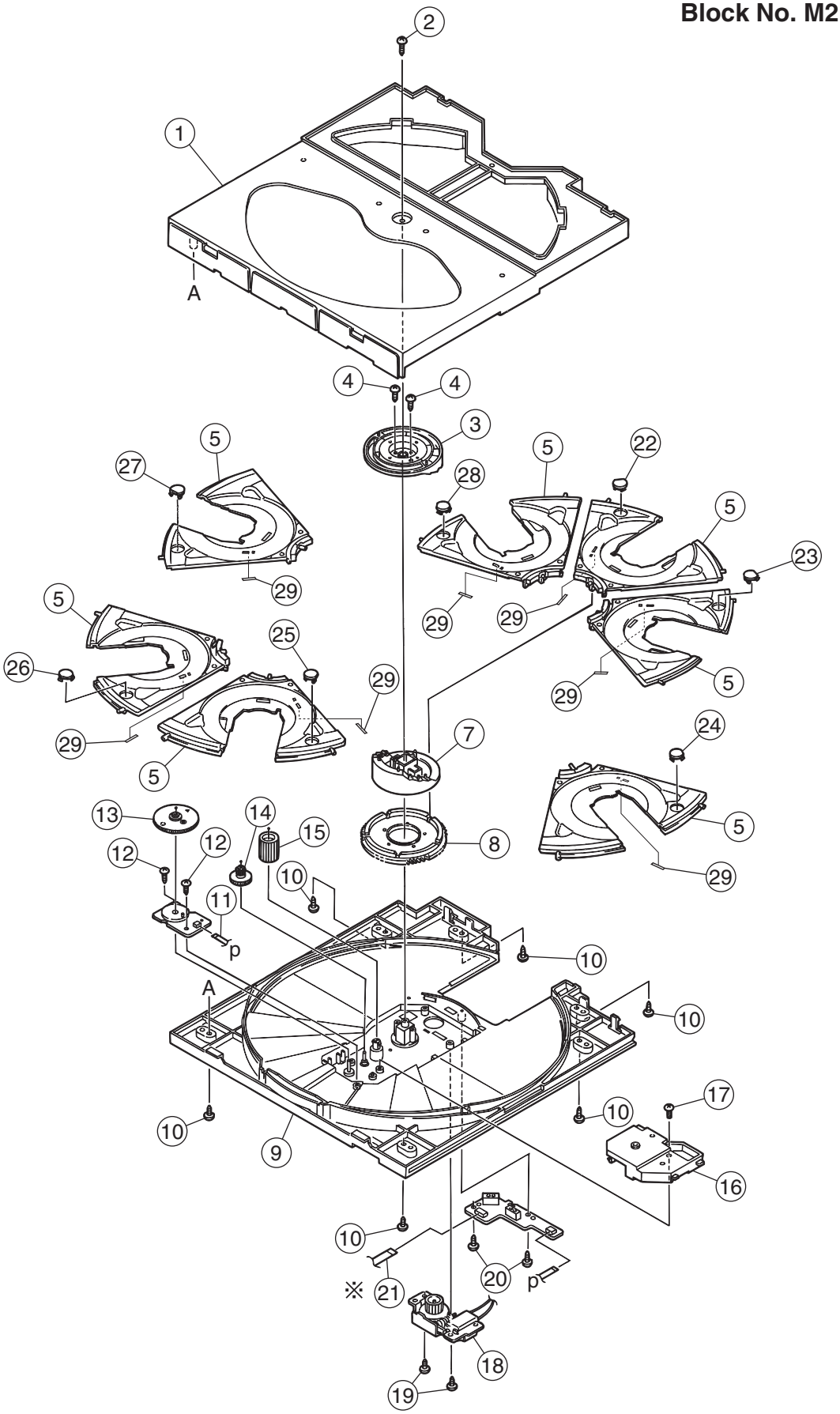
■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	83	LV21033-001A	TM U/D BASE	1		
	84	E65923-003	TAPPING SCREW	2	TM U/D BASE	
	85	----------	TRAVERSE MECHANISM	1	See 3-8 page	
	86	QUQ105-4526AJ	FFC WIRE	1	TO 10058-A1	
	87	LV41120-001A	INSULATOR	2	V8 FRONT(BLACK)	
	88	LV41120-001A	INSULATOR	2	V8 REAR(BLACK)	
	89	LV41119-001A	SPECIAL SCREW	4	INSULATOR	
	90	LV21035-001A	TM U/D CAM	1		
	91	E65923-003	TAPPING SCREW	2	TM U/D CAM	
	92	QYSBSF3008Z	SCREW	2	MOTOR PWB	
	93	RF-500TB-12560	MOTOR	1	LOADING	
	94	LV42340-001A	MOTOR PULLEY	1		
	96	LE20661-001A	PUSH BUTTON	1	SKIP	BK
		LE20661-002A	PUSH BUTTON	1	SKIP	SL
	97	QZW0093-001	PC SUPPORT	1		
	98	LE30001-032A	SPACER	2	MAIN TRAY	
	99	LE30001-032A	SPACER	1	M.COVER	
	100	QUQ412-1806CJ	FFC WIRE	2		

Tray mechanism assembly and parts list

Block No. M2MM



※ : This FFC wire is the same as the wire "d" in the General assembly(page 3-2).

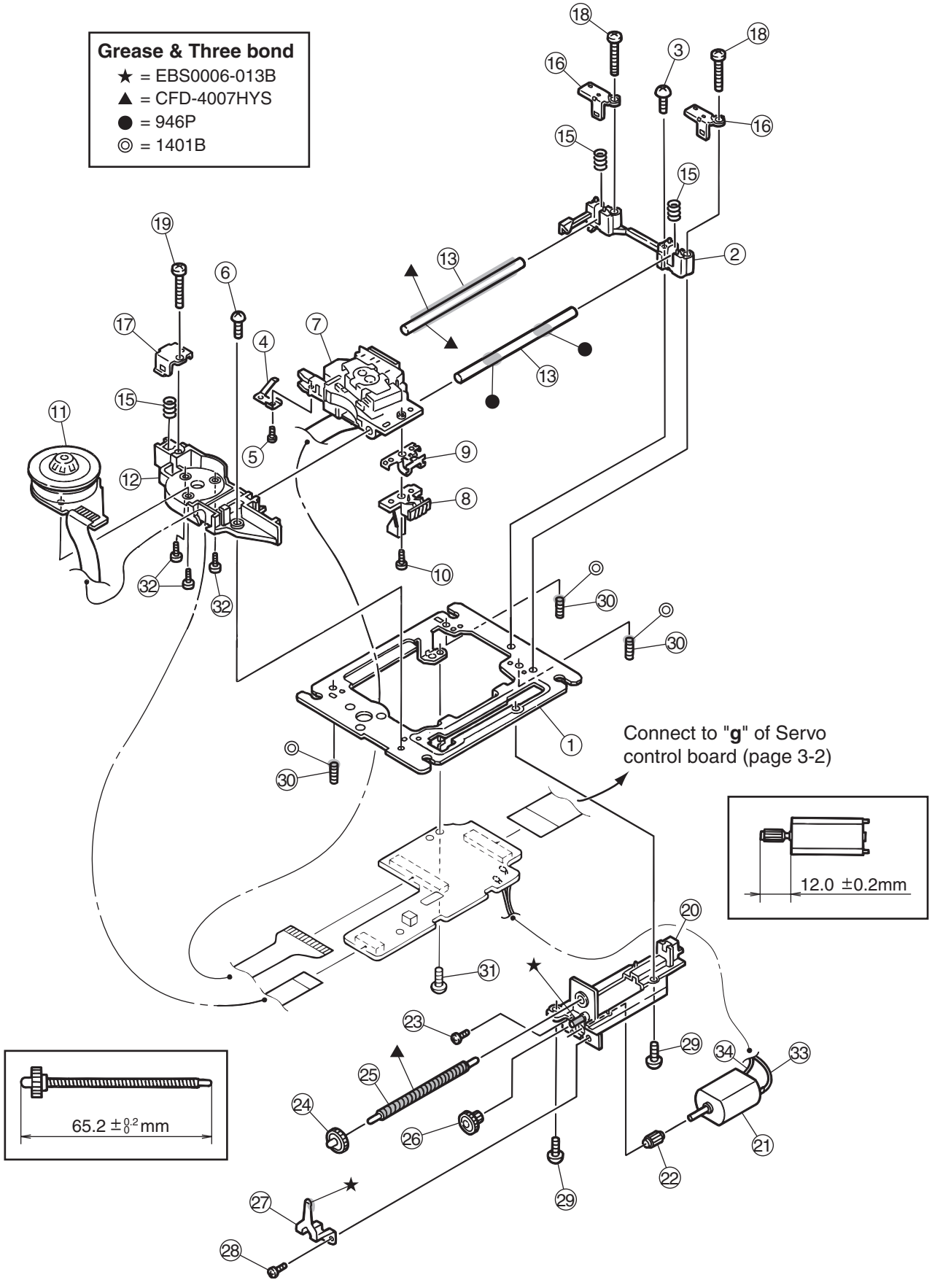
■ Parts list (Tray mechanism assembly)

Block No. M2MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV10532-001A	MAIN TRAY COVER	1		
	2	QYSBSF3008Z	SCREW	1	MAIN TRAY T	
	3	LV21037-001A	U/D CAM(U)	1		
	4	QYSBSF3008Z	SCREW	2		
	5	LV10531-001A	SUB TRAY	7		
	7	LV21036-001A	U/D CAM(L)	1		
	8	LV32741-001A	ACT.GEAR(1)	1		
	9	LV10530-001A	MAIN TRAY	1		
	10	QYSBSF3008Z	SCREW	6	MAIN TRAY B	
	11	QUQ110-0422BJ	FFC WIRE	1		
	12	QYSBSF3006M	SCREW	2	CAM SW. PWB	
	13	LV32743-001A	CAM GEAR(2)	1		
	14	LV32742-001A	CAM GEAR(1)	1		
	15	LV42343-001A	ACT.GEAR(2)	1		
	16	LV32744-001A	GEAR COVER	1		
	17	QYSBSF3006M	SCREW	1		
	18	M.BASE-L71-1M	MOTOR BASE UNIT	1		
	19	QYSBSF3008Z	SCREW	2	MOTOR BASE	
	20	QYSBSF3008Z	SCREW	2	TRAY PWB	
	21	QUQ110-0922AJ	FFC WIRE	1		
	22	LV32750-001A1	NUMBER PLATE 1	1		
	23	LV32750-001A7	NUMBER PLATE 7	1		
	24	LV32750-001A6	NUMBER PLATE 6	1		
	25	LV32750-001A5	NUMBER PLATE 5	1		
	26	LV32750-001A4	NUMBER PLATE 4	1		
	27	LV32750-001A3	NUMBER PLATE 3	1		
	28	LV32750-001A2	NUMBER PLATE 2	1		
	29	LV42342-001A	REFLECTOR	7		

Traverse mechanism assembly and parts list

Block No. M3MM



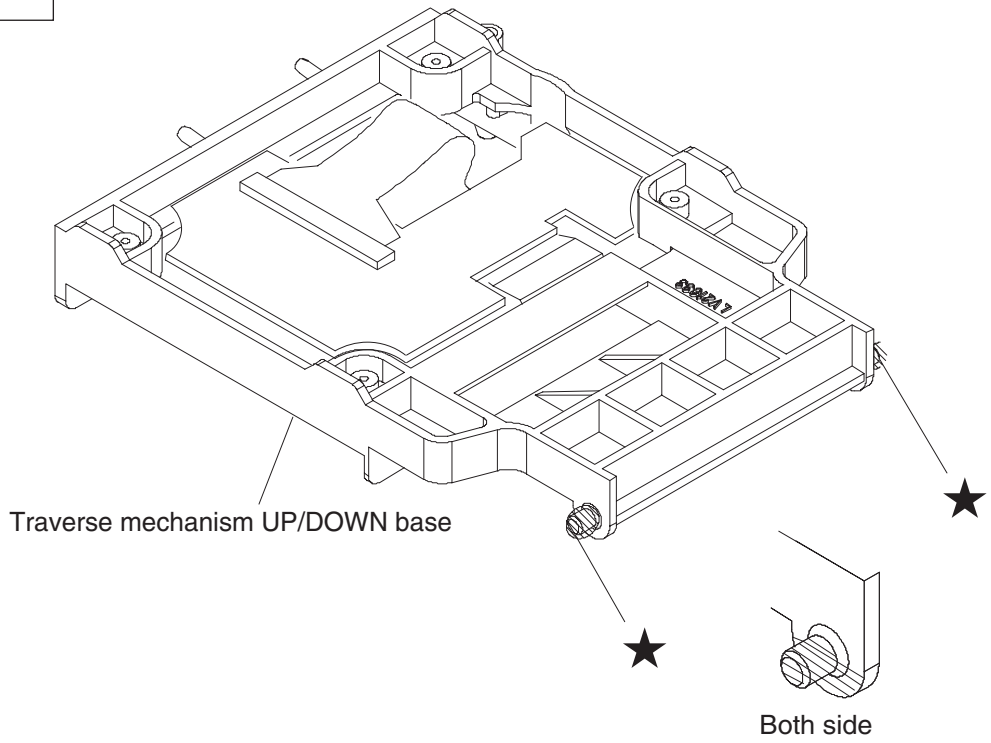
■ Parts list (Traverse mechanism assembly)

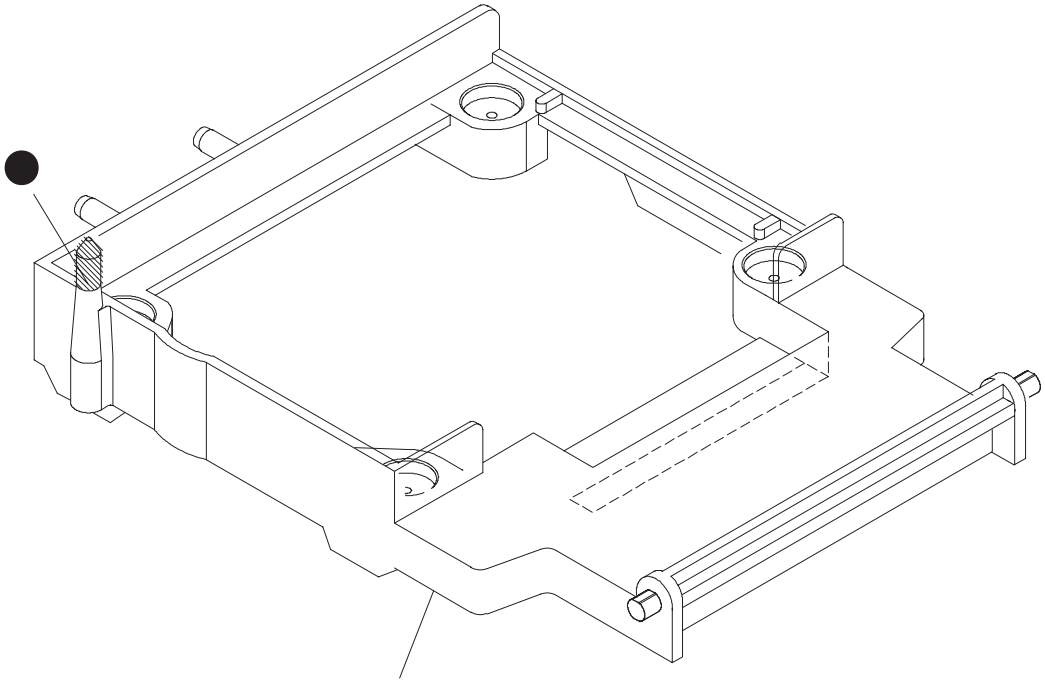
Block No. M3MM

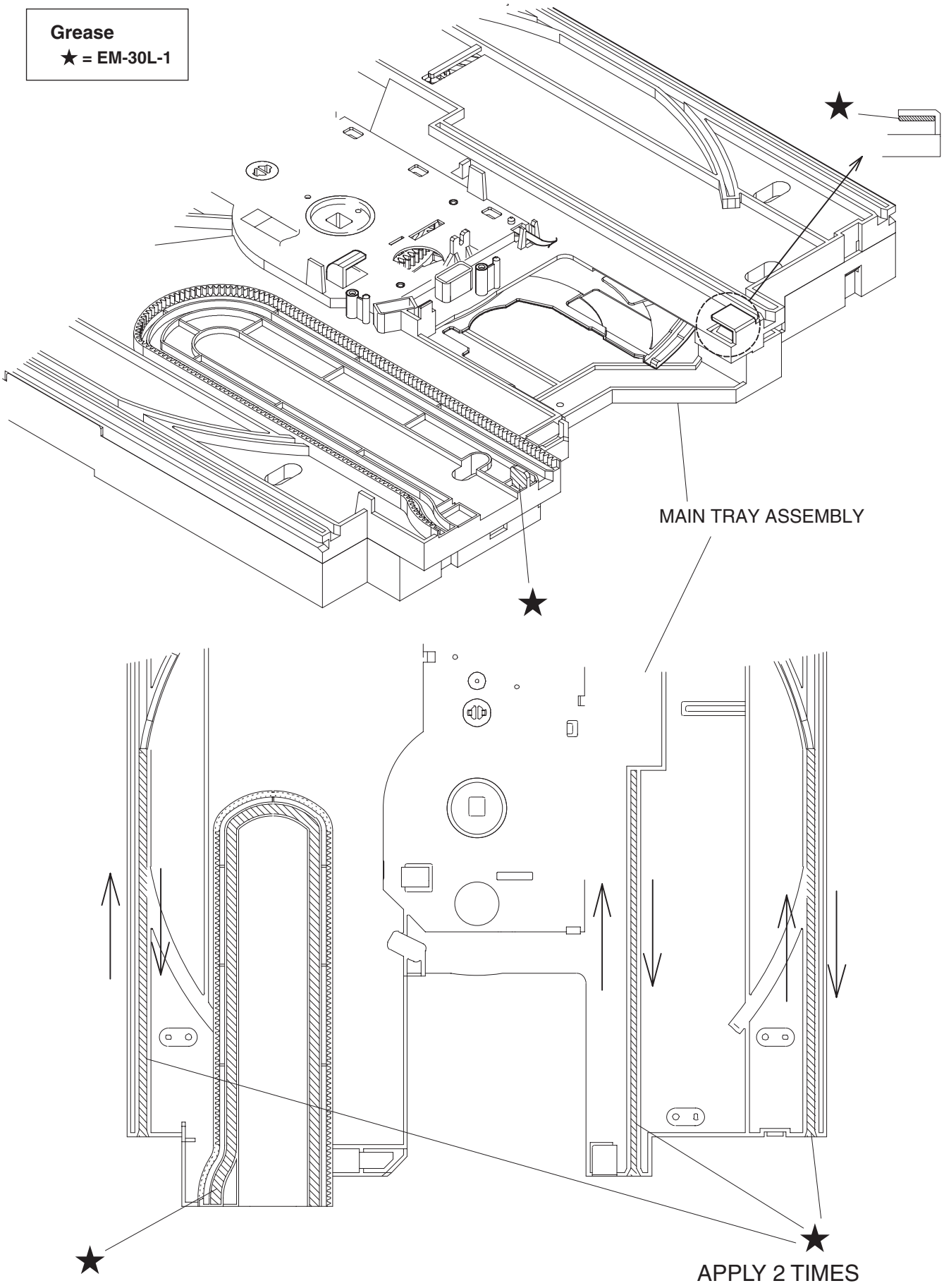
⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LE20572-001A	MECHA BASE	1		
	2	LV20635-001A	SHAFT HOLDER	1		
	3	QYSBST2606M	T.SCREW	1		
	4	LV31743-002A	P.U. SPRING	1		
	5	QYSPSGT1416M	MINI SCREW	1	P. U. SPRING	
	6	QYSBST2606M	T.SCREW	1	S. BASE & M. BASE	
	7	OPTIMA-2010B1	DVD PICK UP	1		
	8	LV31670-001A	SWITCH ACTUATOR	1		
	9	LV31666-002A	LEAD SPRING	1		
	10	QYSPSGT2040M	SCREW	1		
	11	QAR0180-001	SPINDLE MOTOR	1		
	12	LE20573-001A	SPINDLE BASE	1		
	13	LV41121-002A	SHAFT	2		
	15	LV41732-001A	SKEW SPRING	3		
	16	LV31669-001A	SHAFT STOPPER R	2		
	17	LV31668-001A	SHAFT STOPPER F	1		
	18	QYSPST2614M	SCREW	2	STOPPER R	
	19	QYSPST2614M	SCREW	1	STOPPER F	
	20	LV31746-004A	FEED HOLDER ASSY	1		
	21	QAR0165-001	FEED MOTOR	1		
	22	LV41510-201A	FEED GEAR T	1		
	23	QYSPSPU2040M	SCREW	1		
	24	LV41512-201A	FEED GEAR E	1		
	25	LV41517-001A	LEAD SCREW	1		
	26	LV41511-202A	FEED GEAR M	1		
	27	LV31667-001A	THRUST SPRING	1		
	28	QYSPSPU2040M	SCREW	1		
	29	QYSBST2606M	T.SCREW	2		
	30	QYYASPF2608N	HEX SCREW	3		
	31	QYSBST2606M	T.SCREW	1		
	32	QYSPSPU1740Z	SCREW	3		
	33	QUB543-05A1A1	SIN TWIST WIRE	1		
	34	QUB544-04A1A1	SIN TWIST WIRE	1		

Grease points

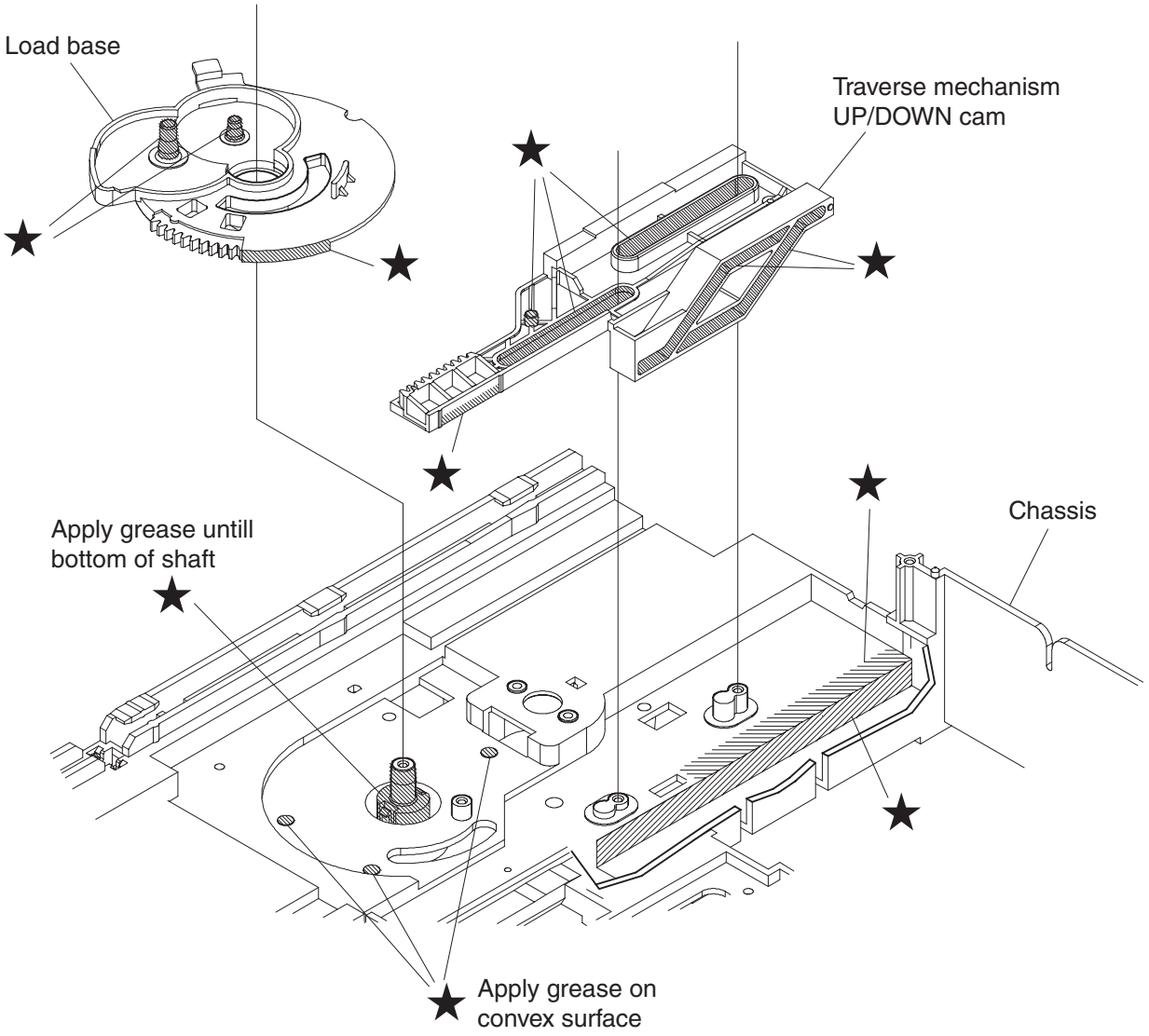
Grease
★ = EM-30L-1
● = FL-7750



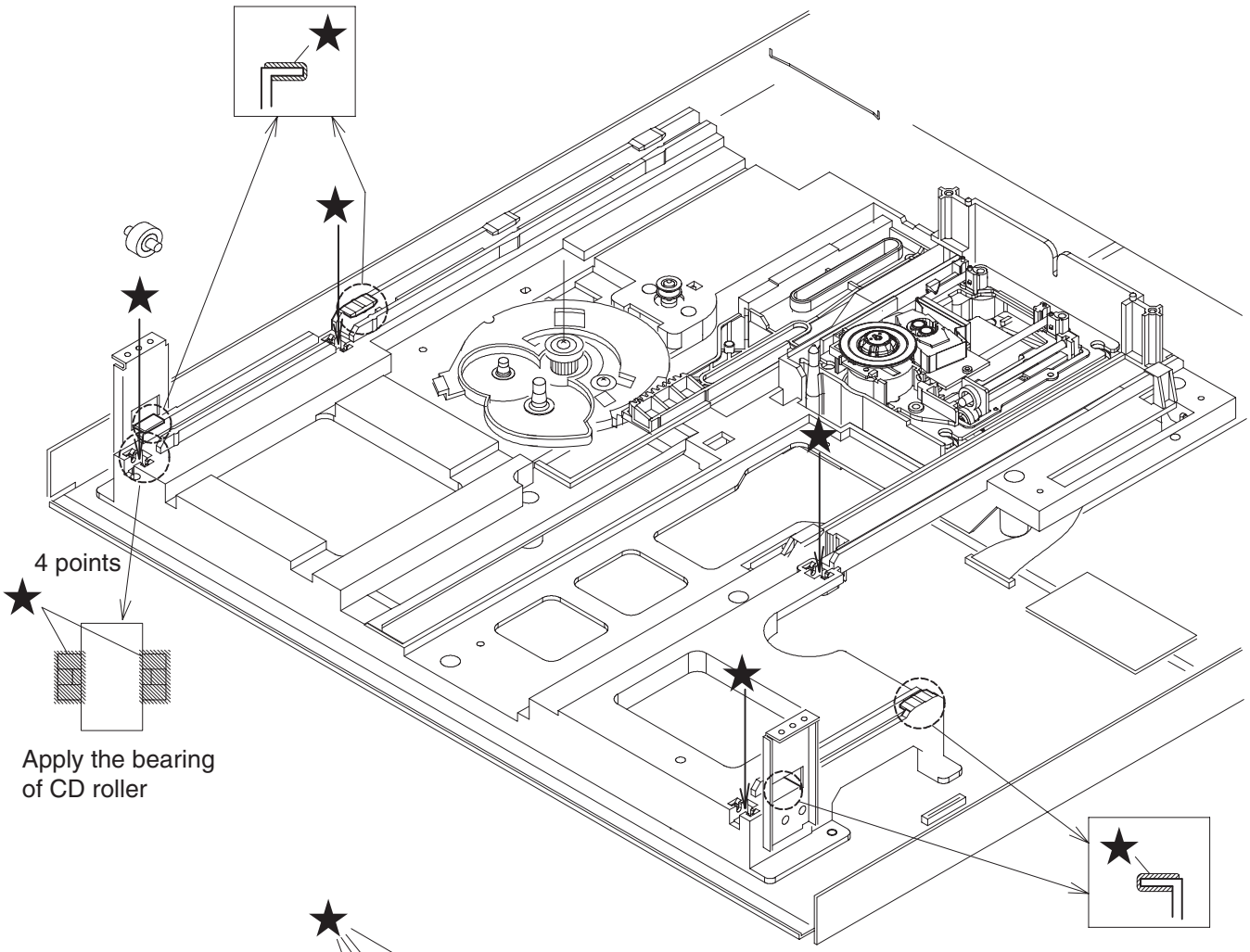


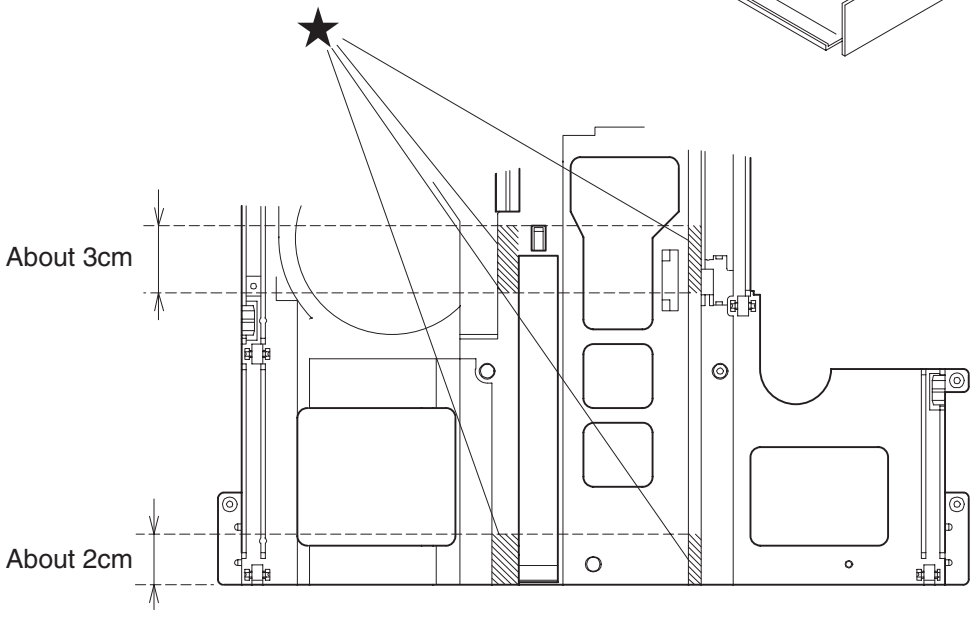

Grease
★ = EM-30L-1
MAIN TRAY ASSEMBLY
APPLY 2 TIMES

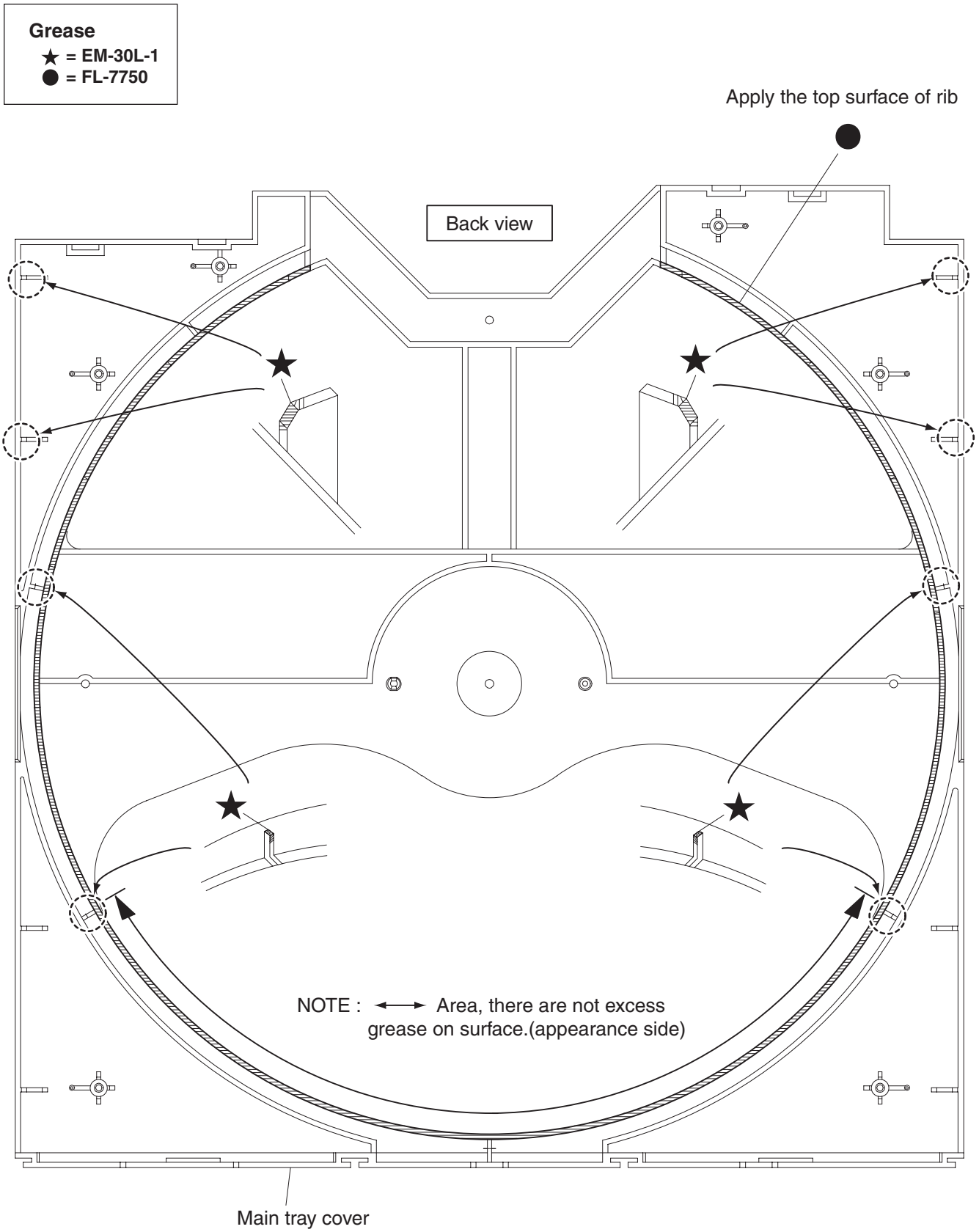
Grease
★ = EM-30L-1

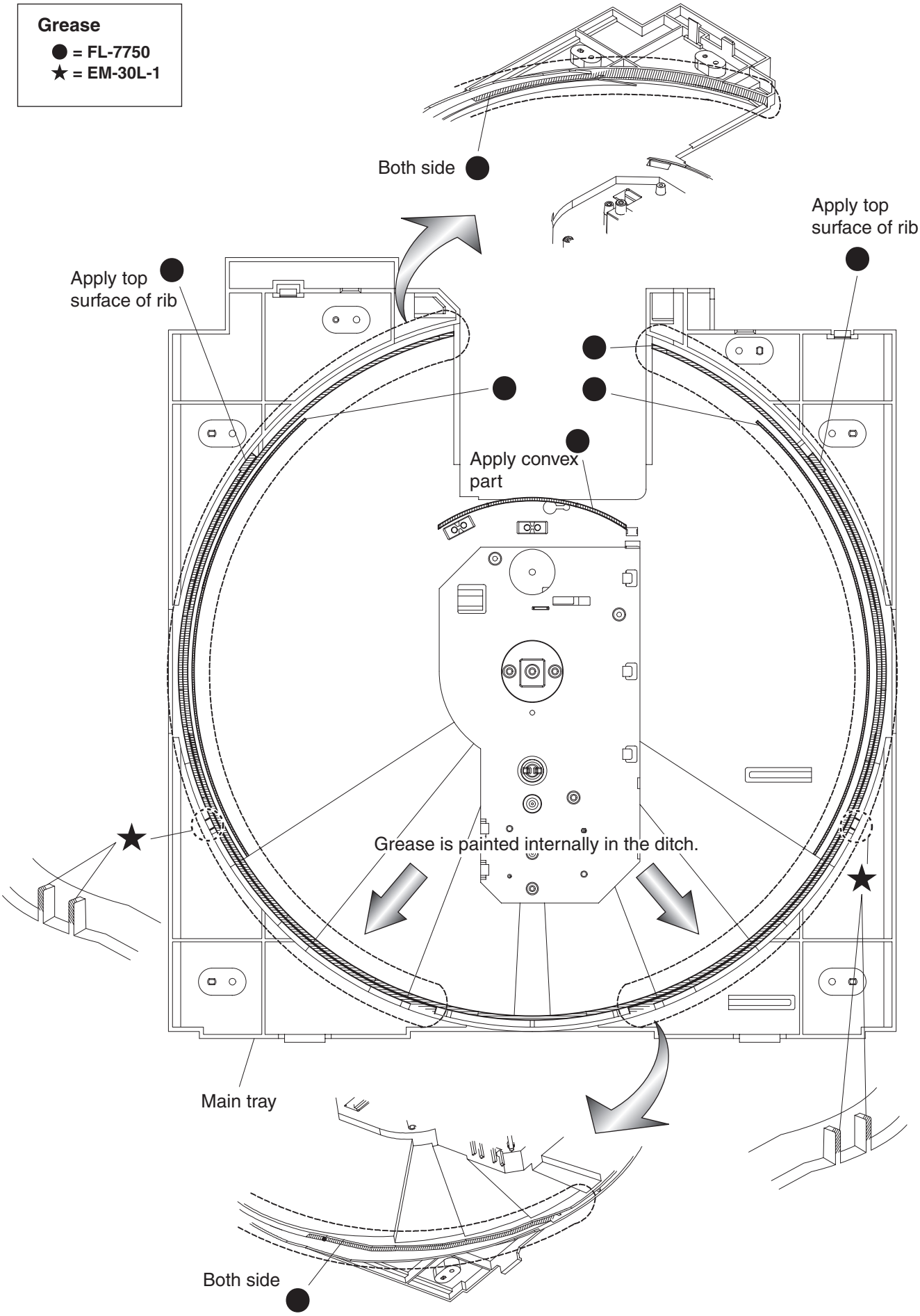


Grease
★ = EM-30L-1

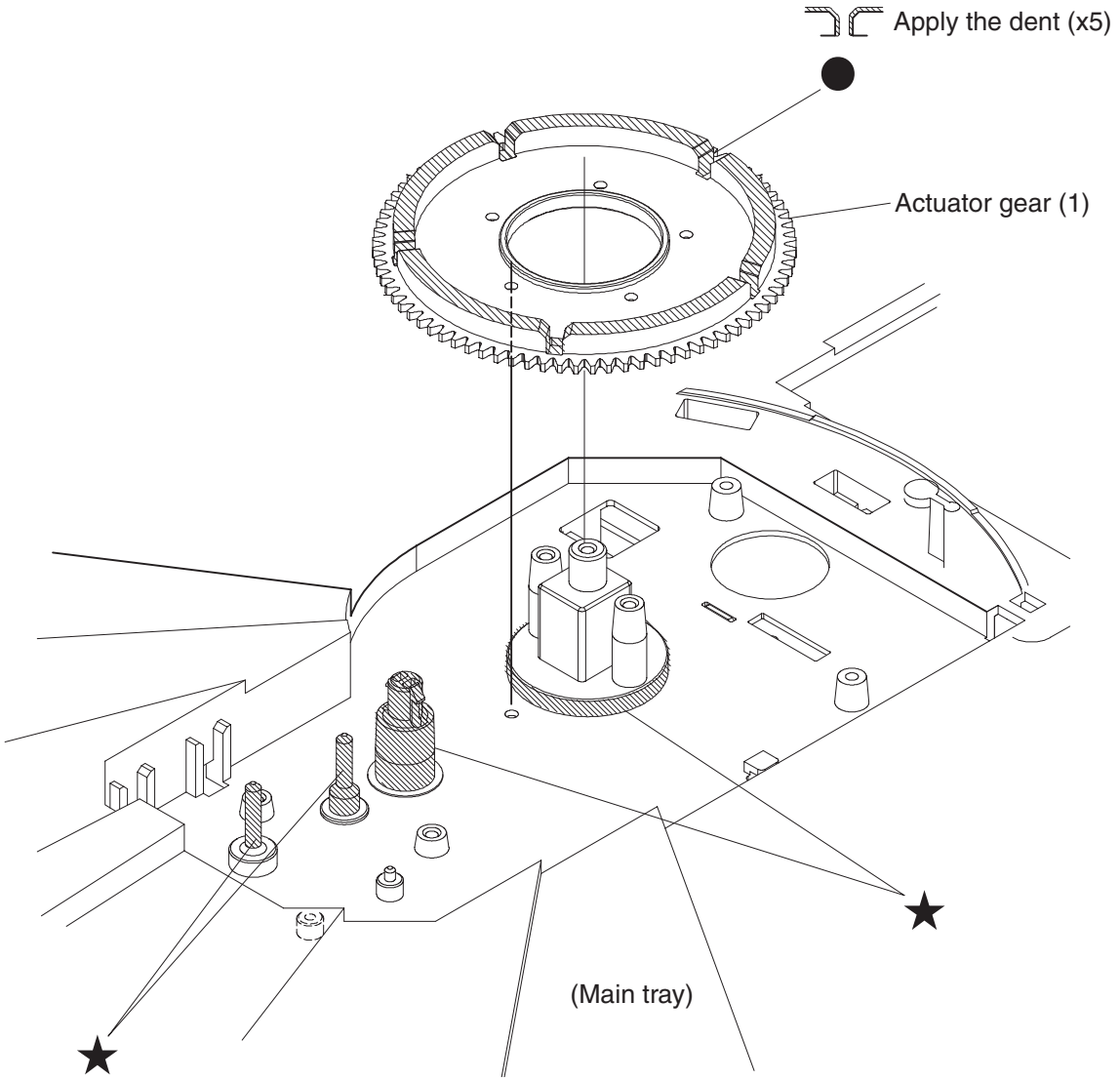




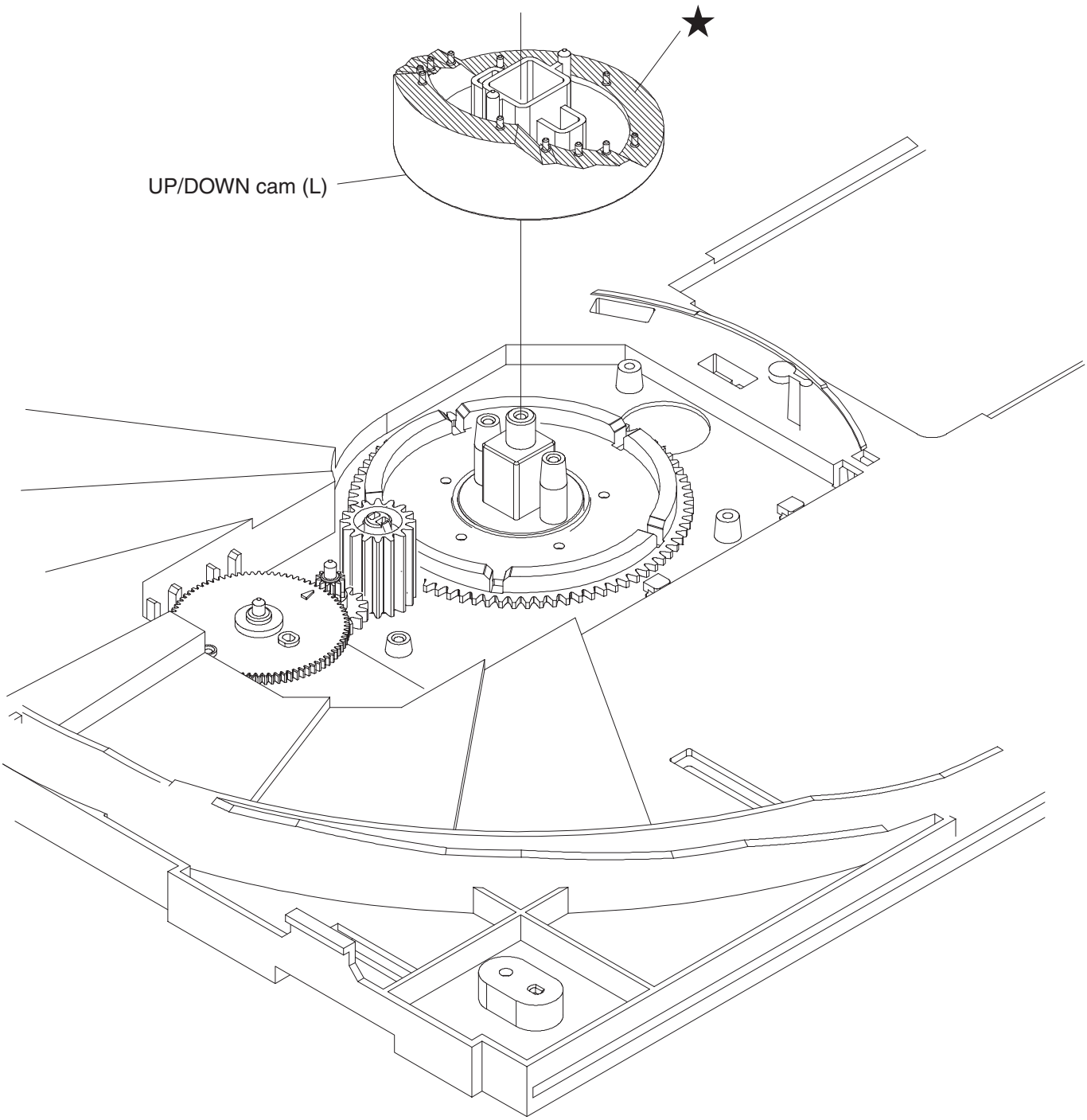

Grease
★ = EM-30L-1
● = FL-7750
Apply the top surface of rib
Back view
NOTE : ⟷ Area, there are not excess grease on surface.(appearance side)
Main tray cover


Grease
● = FL-7750
★ = EM-30L-1
Both side
Apply top surface of rib
Apply top surface of rib
Apply convex part
Grease is painted internally in the ditch.
Main tray
Both side

Grease
★ = EM-30L-1
● = FL-7750

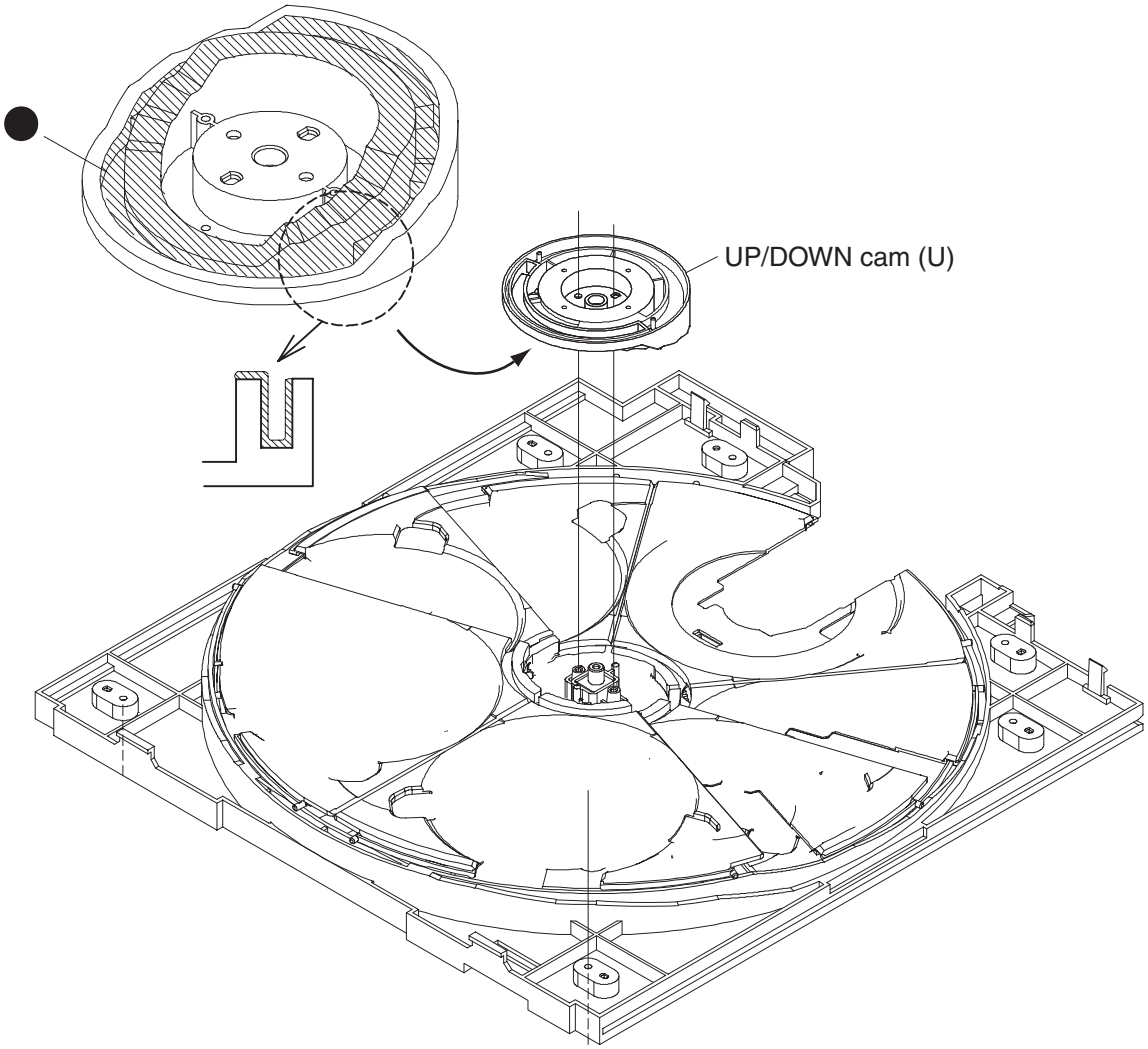


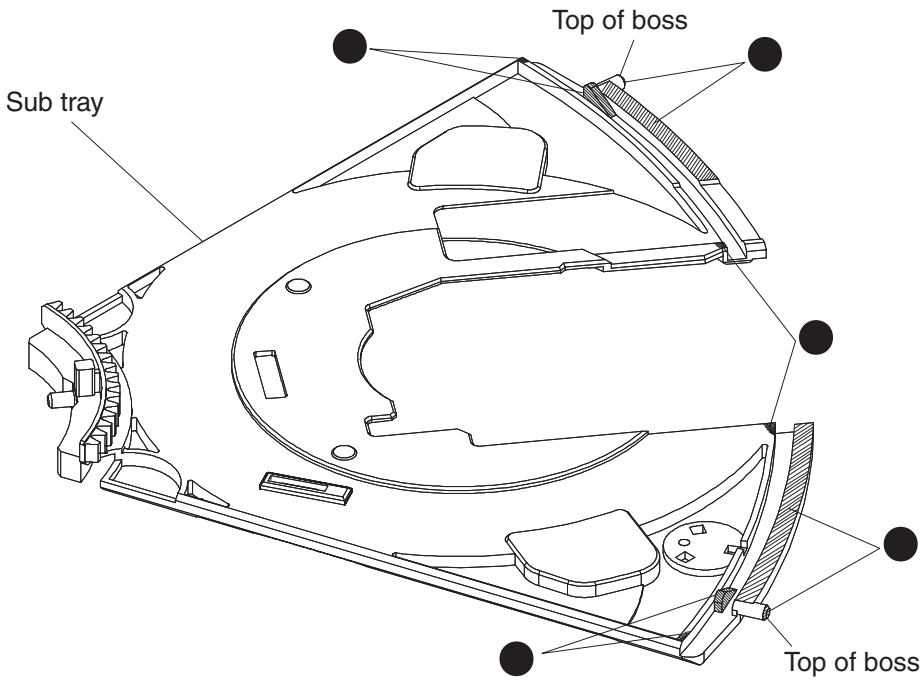
Grease
★ = EM-30L-1



Grease

● = FL-7750





■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 105	NEA70JM-476X	E.CAPACITOR		
	C 106	NEA70JM-476X	E.CAPACITOR		
	C 109	NCB31CK-104X	C CAPACITOR		
	C 110	NCS31HJ-221X	C.CAPA. C.M		
	C 111	NCB31CK-104X	C CAPACITOR		
	C 112	NCB31CK-104X	C CAPACITOR		
	C 113	NEA70JM-226X	E CAPACITOR		
	C 115	NCB31CK-104X	C CAPACITOR		
	C 116	NCB31CK-104X	C CAPACITOR		
	C 117	NCB31CK-473X	C CAPACITOR		
	C 118	NCB31CK-273X	C CAPACITOR		
	C 119	NCB31HK-561X	C CAPACITOR		
	C 120	NCB31HK-561X	C CAPACITOR		
	C 121	NCB31CK-104X	C CAPACITOR		
	C 122	NCS31HJ-120X	C.CAPA. C.M		
	C 123	NCB31CK-104X	C CAPACITOR		
	C 124	NCS31HJ-470X	C.CAPA. C.M		
	C 125	NCB31HK-271X	C CAPACITOR		
	C 126	NCB31CK-104X	C CAPACITOR		
	C 127	NCB31CK-104X	C CAPACITOR		
	C 128	NCB31CK-104X	C CAPACITOR		
	C 129	NCB31HK-472X	C CAPACITOR		
	C 135	NEA70JM-476X	E.CAPACITOR		
	C 137	NEA70GM-476X	E.CAPA. C.M.		
	C 138	NCB31CK-104X	C CAPACITOR		
	C 139	NCB31CK-104X	C CAPACITOR		
	C 141	NCB31CK-104X	C CAPACITOR		
	C 142	NCB31CK-104X	C CAPACITOR		
	C 143	NCB31CK-104X	C CAPACITOR		
	C 144	NCB31CK-103X	C CAPACITOR		
	C 146	NCB31CK-104X	C CAPACITOR		
	C 201	NEA70JM-226X	E CAPACITOR		
	C 203	NCB31CK-104X	C CAPACITOR		
	C 204	NCB31CK-104X	C CAPACITOR		
	C 205	NCS31HJ-121X	C CAPACITOR		
	C 207	NCB31HK-391X	C CAPACITOR		
	C 208	NCB31HK-391X	C CAPACITOR		
	C 211	NCB31HK-223X	C CAPACITOR		
	C 212	NCB31CK-103X	C CAPACITOR		
	C 216	NCB30JK-105X	C CAPACITOR		
	C 217	NCB31CK-104X	C CAPACITOR		
	C 218	NCB30JK-105X	C CAPACITOR		
	C 251	NCB31CK-104X	C CAPACITOR		
	C 252	NEA71AM-336X	E CAPACITOR		
	C 253	NCB31CK-104X	C CAPACITOR		
	C 255	NCB31CK-153X	C CAPACITOR		
	C 256	NCB31CK-104X	C CAPACITOR		
	C 257	NCB31CK-104X	C CAPACITOR		
	C 258	NCB31CK-104X	C CAPACITOR		
	C 259	NCB31CK-104X	C CAPACITOR		
	C 260	NCB31CK-104X	C CAPACITOR		
	C 261	NCB31CK-104X	C CAPACITOR		
	C 262	NCB31CK-104X	C CAPACITOR		
	C 263	NCB31CK-104X	C CAPACITOR		
	C 264	NCB31CK-103X	C CAPACITOR		
	C 301	NCB31CK-104X	C CAPACITOR		
	C 302	NCB31CK-104X	C CAPACITOR		
	C 303	NCB31CK-104X	C CAPACITOR		
	C 304	NEA70GM-107X	E CAPACITOR		
	C 306	NEA70GM-107X	E CAPACITOR		
	C 308	NEA70GM-107X	E CAPACITOR		
	C 310	NCB31CK-104X	C CAPACITOR		
	C 311	NCB31HK-561X	C CAPACITOR		
	C 312	NCB31HK-561X	C CAPACITOR		
	C 313	NCB31HK-561X	C CAPACITOR		
	C 314	NCB31HK-331X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C 315	NCB31HK-471X	C CAPACITOR		
	C 316	NCB31HK-271X	C CAPACITOR		
	C 317	NCS31HJ-121X	C CAPACITOR		
	C 318	NCB31CK-104X	C CAPACITOR		
	C 319	NCB31HK-102X	C CAPACITOR		
	C 320	NCB31HK-102X	C CAPACITOR		
	C 321	NCB31HK-102X	C CAPACITOR		
	C 322	NCB31HK-562X	C CAPACITOR		
	C 323	NCB31HK-102X	C CAPACITOR		
	C 324	NCB31CK-104X	C CAPACITOR		
	C 325	NCS31HJ-470X	C.CAPA. C.M		
	C 326	NCB31CK-183X	C CAPACITOR		
	C 327	NCB31HK-102X	C CAPACITOR		
	C 328	NCB31CK-104X	C CAPACITOR		
	C 329	NCB31CK-103X	C CAPACITOR		
	C 330	NCB31CK-104X	C CAPACITOR		
	C 331	NCB31CK-103X	C CAPACITOR		
	C 332	NCB21CK-105X	C CAPACITOR		
	C 333	NCB31CK-104X	C CAPACITOR		
	C 334	NCB31CK-104X	C CAPACITOR		
	C 337	NCB31CK-104X	C CAPACITOR		
	C 338	NCB31CK-104X	C CAPACITOR		
	C 339	NCB31CK-104X	C CAPACITOR		
	C 340	NCB31CK-104X	C CAPACITOR		
	C 341	NCB31CK-104X	C CAPACITOR		
	C 342	NCB31CK-104X	C CAPACITOR		
	C 343	NCB31CK-104X	C CAPACITOR		
	C 344	NCB31CK-104X	C CAPACITOR		
	C 345	NCB31CK-104X	C CAPACITOR		
	C 346	NCB31CK-104X	C CAPACITOR		
	C 347	NCB31CK-104X	C CAPACITOR		
	C 348	NCB31CK-104X	C CAPACITOR		
	C 349	NCB31CK-104X	C CAPACITOR		
	C 350	NCB31CK-104X	C CAPACITOR		
	C 401	NEA70GM-476X	E.CAPA. C.M.		
	C 402	NCB31CK-104X	C CAPACITOR		
	C 403	NCB31CK-104X	C CAPACITOR		
	C 404	NCB31CK-104X	C CAPACITOR		
	C 405	NCB31CK-104X	C CAPACITOR		
	C 406	NCB31CK-104X	C CAPACITOR		
	C 407	NCB31CK-104X	C CAPACITOR		
	C 450	NCB31CK-104X	C CAPACITOR		
	C 451	NCB31CK-104X	C CAPACITOR		
	C 452	NEA71CM-476X	E CAPACITOR		
	C 453	NCB31CK-104X	C CAPACITOR		
	C 454	NEA71CM-476X	E CAPACITOR		
	C 455	NEA71HM-105X	E.CAPA. C.M.		
	C 501	NCB31CK-104X	C CAPACITOR		
	C 506	NDC31HJ-150X	C CAPACITOR		
	C 507	NDC31HJ-180X	C.CAPACITOR		
	C 511	NEA70GM-476X	E.CAPA. C.M.		
	C 512	NCB31CK-104X	C CAPACITOR		
	C 514	NCB31CK-104X	C CAPACITOR		
	C 515	NCB31CK-104X	C CAPACITOR		
	C 516	NCB31CK-104X	C CAPACITOR		
	C 517	NCB31CK-104X	C CAPACITOR		
	C 518	NCB31CK-104X	C CAPACITOR		
	C 519	NCB31CK-104X	C CAPACITOR		
	C 520	NCB31CK-104X	C CAPACITOR		
	C 523	NCB31CK-104X	C CAPACITOR		
	C 524	NEA70GM-476X	E.CAPA. C.M.		
	C 527	NEA70GM-476X	E.CAPA. C.M.		
	C 528	NCB31CK-104X	C CAPACITOR		
	C 529	NCB31CK-104X	C CAPACITOR		
	C 531	NCB31CK-104X	C CAPACITOR		
	C 532	NCB31CK-104X	C CAPACITOR		

■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 533	NCB31CK-104X	C CAPACITOR		
	C 534	NCB31CK-104X	C CAPACITOR		
	C 535	NCB31CK-104X	C CAPACITOR		
	C 536	NCB31CK-104X	C CAPACITOR		
	C 539	NCB31CK-104X	C CAPACITOR		
	C 540	NCB31CK-104X	C CAPACITOR		
	C 541	NCB31CK-104X	C CAPACITOR		
	C 542	NCB31CK-104X	C CAPACITOR		
	C 543	NCB31CK-104X	C CAPACITOR		
	C 544	NCB31CK-104X	C CAPACITOR		
	C 545	NCB31CK-104X	C CAPACITOR		
	C 547	NCB31CK-104X	C CAPACITOR		
	C 548	NCB31CK-104X	C CAPACITOR		
	C 549	NEA70GM-476X	E.CAPA. C.M.		
	C 550	NCB31CK-104X	C CAPACITOR		
	C 555	NCB31CK-104X	C CAPACITOR		
	C 557	NCB31CK-104X	C CAPACITOR		
	C 569	NCB31CK-104X	C CAPACITOR		
	C 571	NEA70GM-476X	E.CAPA. C.M.		
	C 572	NCB31CK-104X	C CAPACITOR		
	C 573	NEA70GM-227X	E.CAPA, C.M		
	C 578	NCB31CK-104X	C CAPACITOR		
	C 580	NEA70GM-476X	E.CAPA. C.M.		
	C 581	NEA70GM-227X	E.CAPA, C.M		
	C 582	NEA70GM-476X	E.CAPA. C.M.		
	C 601	NEA70GM-476X	E.CAPA. C.M.		
	C 602	NEA70GM-476X	E.CAPA. C.M.		
	C 605	NEA70JM-107X	E.CAPACITOR		
	C 606	NCB31CK-104X	C CAPACITOR		
	C 607	NEA70JM-227X	E CAPACITOR		
	C 608	NEA70JM-227X	E CAPACITOR		
	C 609	NEA70JM-227X	E CAPACITOR		
	C 610	NEA70JM-227X	E CAPACITOR		
	C 611	NCB31CK-104X	C CAPACITOR		
	C 612	NEA71EM-475X	E.CAPACITOR.		
	C 613	NEA71EM-475X	E.CAPACITOR.		
	C 614	NEA70JM-227X	E CAPACITOR		
	C 615	NEA70JM-227X	E CAPACITOR		
	C 616	NCF21CZ-155X	C CAPACITOR		
	C 618	NCB31CK-104X	C CAPACITOR		
	C 619	NCB31CK-104X	C CAPACITOR		
	C 620	NCB31CK-104X	C CAPACITOR		
	C 621	NCB31CK-104X	C CAPACITOR		
	C 623	NEA70JM-226X	E CAPACITOR		
	C 624	NEA70JM-226X	E CAPACITOR		
	C 625	NEA70JM-226X	E CAPACITOR		
	C 626	NEA70JM-226X	E CAPACITOR		
	C 627	NEA70JM-226X	E CAPACITOR		
	C 801	NEA71AM-107X	E.CAPA. C.M.		
	C 802	NCB31CK-104X	C CAPACITOR		
	C 803	NEA71AM-107X	E.CAPA. C.M.		
	C 804	NCB31CK-223X	C CAPACITOR		
	C 805	NCB31CK-103X	C CAPACITOR		
	C 808	NCS31HJ-471X	C CAPACITOR		
	C 809	NCS31HJ-331X	C.CAPA. C.M		
	C9300	NCS31HJ-101X	C.CAPA. C.M		
	C9301	NCS31HJ-101X	C.CAPA. C.M		
	C9801	NCS31HJ-680X	C.CAPA. C.M		
	C9802	NCS31HJ-680X	C.CAPA. C.M		
	C9803	NCS31HJ-120X	C.CAPA. C.M		
	C9804	NCS31HJ-102X	C CAPACITOR		
	C9805	NCS31HJ-820X	C CAPACITOR		
	C9806	NCS31HJ-221X	C.CAPA. C.M		
	C9807	NCS31HJ-180X	C CAPACITOR		
	C9808	NCS31HJ-181X	C CAPACITOR		
	C9809	NCB31HK-392X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C9810	NCB31CK-183X	C CAPACITOR		
	C9811	NCB31CK-104X	C CAPACITOR		
	C9902	NCB31CK-104X	C CAPACITOR		
	C9904	NCB31CK-104X	C CAPACITOR		
	C9906	NCB31CK-104X	C CAPACITOR		
	C9908	NCB31CK-104X	C CAPACITOR		
	C9921	NEA70JM-107X	E.CAPACITOR		
	C9922	NEA70JM-107X	E.CAPACITOR		
	C9923	NEA70JM-107X	E.CAPACITOR		
	C9924	NEA70JM-107X	E.CAPACITOR		
	C9926	NEA70JM-107X	E.CAPACITOR	FOR M5V	
	C9927	NCB31CK-104X	C CAPACITOR		
	C9992	NCB31CK-104X	C CAPACITOR		
	C9993	NCB31CK-104X	C CAPACITOR		
	C9994	NCB31CK-104X	C CAPACITOR		
	C9995	NCB31CK-104X	C CAPACITOR		
	C9996	NCB31CK-104X	C CAPACITOR		
	C9997	NCB31CK-104X	C CAPACITOR		
	C9998	NCB31CK-104X	C CAPACITOR		
	CN 11	QGF0522F1-45W	FFC/FPC CONNECTOR	MAIN-PIC	
	CN601	QGF1204C2-18	FFC/FPC CONNECTOR	MAIN-A.V.	
	CN602	QGF1204C2-18	FFC/FPC CONNECTOR	MAIN-A.V.	
	CN603	QGB2510J1-16	CONNECTOR	MAIN-A.4CH	
	CN801	QGF1016C2-13W	FFC/FPC CONNECTOR	MAIN-FRONT	
	CN803	QGF0503C1-40V	CONNECTOR	MAIN-FRONT	
	CN807	QGA2001F2-08X	CONNECTOR	PS-MAIN	
	CN808	QGA2001C2-06X	CONNECTOR	MAIN-LOADER	
	CN809	QGA2001C2-03X	CONNECTOR	MAIN-LOADER	
	CN810	QGA2001C2-09X	CONNECTOR	MAIN-CONNECT	
	CN901	QGA2001F2-13X	CONNECTOR	PS-MAIN	
	D 101	RB521S-30-X	SB DIODE		
	D 451	1SS355-X	DIODE C.M		
	D 452	1SS355-X	DIODE C.M		
	D 453	1SS355-X	DIODE C.M		
	D 454	1SS355-X	DIODE C.M		
	D 455	UDZS9.1B-X	Z DIODE		
	D 456	1SS355-X	DIODE C.M		
	D 610	1SS355-X	DIODE C.M		
	D 611	1SS355-X	DIODE C.M		
	D 612	1SS355-X	DIODE C.M		
	D 613	1SS355-X	DIODE C.M		
	D 614	1SS355-X	DIODE C.M		
	D 615	1SS355-X	DIODE C.M		
	D 801	1SS355-X	DIODE C.M		
	D 802	1SS355-X	DIODE C.M		
	D 803	1SS355-X	DIODE C.M		
	IC101	AN8703FH-V	IC		
	IC201	BA5983FM-X	IC		
	IC251	BA6664FM-X	LSI		
	IC301	MN103S26EGA	IC		
	IC401	MN102L62GLK	IC		
	IC411	BA6287F-X	IC		
	IC412	BA6287F-X	IC		
	IC451	S-93C66AFJ-X	IC		
	IC501	NDV8611VWA	IC		
	IC505	K4S643232E-TC60	IC		
	IC509	SST39VF160H0441	IC (FLASH)	LSB	
	IC510	S-93C66AFJ-X	IC		
	IC511	LM1117MP1.8-X	IC		
	IC512	74LCX373MTC-X	IC(DIGITAL)		
	IC513	74LCX373MTC-X	IC(DIGITAL)		
	IC521	MM74HCT32MTC-X	IC		
	IC522	74LCX32MTC-X	IC(DIGITAL)		
	IC523	NC7SZ125P5-X	IC(DIGITAL)		
	IC601	BA7660FS-X	V.BUFFER		
	IC602	BA7665FS-X	V.BUFFER		

■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	IC801	UPD780206GF-125	IC MICON		
	IC803	PST574M/E/-W	IC		
	K 101	NQR0007-002X	FERRITE BEADS		
	K 301	NQR0007-002X	FERRITE BEADS		
	K 302	NQR0007-002X	FERRITE BEADS		
	K 303	NQR0007-002X	FERRITE BEADS		
	K 304	NQR0007-002X	FERRITE BEADS		
	K 401	NQR0007-002X	FERRITE BEADS		
	K 501	NQR0007-002X	FERRITE BEADS		
	K 504	NQR0007-002X	FERRITE BEADS		
	K 505	NQR0007-002X	FERRITE BEADS		
	K 507	NQR0007-002X	FERRITE BEADS		
	K 508	NQR0007-002X	FERRITE BEADS		
	K 509	NQR0007-002X	FERRITE BEADS		
	K 510	NQR0007-002X	FERRITE BEADS		
	K 513	NQR0007-002X	FERRITE BEADS		
	K 519	NQR0007-002X	FERRITE BEADS		
	K 520	NQR0007-002X	FERRITE BEADS		
	K 553	NQR0007-002X	FERRITE BEADS		
	K 554	NQR0007-002X	FERRITE BEADS		
	K 555	NQR0007-002X	FERRITE BEADS		
	K 556	NQR0007-002X	FERRITE BEADS		
	K 557	NQR0007-002X	FERRITE BEADS		
	K 558	NQR0007-002X	FERRITE BEADS		
	K 559	NQR0007-002X	FERRITE BEADS		
	K 564	NQR0007-002X	FERRITE BEADS		
	K 566	NRSA02J-0R0X	MG RESISTOR		
	K 567	NQR0007-002X	FERRITE BEADS		
	K 568	NQR0007-002X	FERRITE BEADS		
	K 569	NQR0007-002X	FERRITE BEADS		
	K 570	NQR0007-002X	FERRITE BEADS		
	K 571	NQR0007-002X	FERRITE BEADS		
	K 574	NQR0007-002X	FERRITE BEADS		
	K 580	NQR0007-002X	FERRITE BEADS		
	K 581	NQR0007-002X	FERRITE BEADS		
	K 583	NQR0007-002X	FERRITE BEADS		
	K 585	NQR0007-002X	FERRITE BEADS		
	K 601	NQR0007-002X	FERRITE BEADS		
	K 602	NRSA02J-100X	MG RESISTOR		
	K 611	NQL044K-100X	INDUCTOR		
	L 501	NQL044K-100X	INDUCTOR		
	L 601	NQR0461-001X	LPF		
	L 602	NQR0460-001X	LPF		
	L 603	NQR0460-001X	LPF		
	L 604	NQR0460-001X	LPF		
	L 801	NQL044M-2R2X	INDUCTOR.C.M.		
	L9901	NQL044K-100X	INDUCTOR		
	L9902	NQL044K-100X	INDUCTOR		
	Q 101	KTA1001/Y/-X	TRANSISTOR		
	Q 102	KTA1001/Y/-X	TRANSISTOR		
	Q 103	DTA144EE-X	DIGI TRANSISTOR		
	Q 141	2SC2412K/R/-X	TRANSISTOR		
	Q 142	2SC2412K/R/-X	TRANSISTOR		
	Q 401	DTC114EE-X	TRANSISTOR		
	Q 402	DTC114EE-X	TRANSISTOR		
	Q 451	2SC4081/QR/-X	TRANSISTOR		
	Q 452	2SC4081/QR/-X	TRANSISTOR		
	Q 605	DTA114EE-X	DIGITAL.TR		
	Q 606	DTA114EE-X	DIGITAL.TR		
	Q 607	DTA114EE-X	DIGITAL.TR		
	Q 608	DTA114EE-X	DIGITAL.TR		
	Q 801	DTC114YKA-X	CHIP D.TRANSISTOR		
	Q 802	DTA114EE-X	DIGITAL.TR		
	Q 811	KRA102S-X	DIGITAL.TR		
	Q 812	KRA102S-X	DIGITAL.TR		
	Q 813	KRA102S-X	DIGITAL.TR		

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 814	KRA102S-X	DIGITAL.TR		
	Q 815	KRA102S-X	DIGITAL.TR		
	Q 816	KRA102S-X	DIGITAL.TR		
	Q 817	KRA102S-X	DIGITAL.TR		
	Q 818	KRA102S-X	DIGITAL.TR		
	Q 819	KRA102S-X	DIGITAL.TR		
	Q 820	KRA102S-X	DIGITAL.TR		
	Q 821	KRA102S-X	DIGITAL.TR		
	Q 822	KRA102S-X	DIGITAL.TR		
	Q 823	KRA102S-X	DIGITAL.TR		
	Q9801	2SC4617/R/-X	TRANSISTOR		
	Q9802	2SA1774/R/-X	TRANSISTOR		
	Q9803	2SC4617/R/-X	TRANSISTOR		
	Q9804	2SC4617/R/-X	TRANSISTOR		
	Q9805	2SC4617/R/-X	TRANSISTOR		
	Q9806	2SC4617/R/-X	TRANSISTOR		
	Q9807	DTC114EE-X	TRANSISTOR		
	Q9808	2SC4617/R/-X	TRANSISTOR		
	R 11	NRSA63J-0R0X	MG RESISTOR	VR.DVD	
	R 19	NRSA63J-0R0X	MG RESISTOR	VR.CD	
	R 101	NRSA63J-333X	MG RESISTOR		
	R 102	NRSA63J-223X	MG RESISTOR		
	R 103	NRSA63J-223X	MG RESISTOR		
	R 104	NRS125J-270X	MG RESISTOR		
	R 105	NRS125J-270X	MG RESISTOR		
	R 106	NRSA63J-273X	MG RESISTOR		
	R 107	NRSA63J-273X	MG RESISTOR		
	R 108	NRSA63J-222X	MG RESISTOR		
	R 109	NRSA63J-182X	MG RESISTOR		
	R 110	NRSA63J-333X	MG RESISTOR		
	R 111	NRVA63D-243X	RES. C.M		
	R 112	NRSA63J-822X	MG RESISTOR		
	R 113	NRSA63J-103X	MG RESISTOR		
	R 114	NRSA63J-0R0X	MG RESISTOR		
	R 119	NRSA63J-2R2X	MG RESISTOR		
	R 120	NRSA63J-2R2X	MG RESISTOR		
	R 125	NRSA63J-105X	MG RESISTOR		
	R 126	NRSA63J-105X	MG RESISTOR		
	R 127	NRSA63J-222X	MG RESISTOR		
	R 128	NRS125J-1R0X	MG RESISTOR		
	R 129	NRS125J-1R0X	MG RESISTOR		
	R 130	NRSA63J-182X	MG RESISTOR		
	R 141	NRSA63J-102X	MG RESISTOR		
	R 142	NRSA63J-102X	MG RESISTOR		
	R 143	NRSA63J-102X	MG RESISTOR		
	R 144	NRSA63J-102X	MG RESISTOR		
	R 201	NRSA63J-470X	MG RESISTOR		
	R 202	NRS125J-1R0X	MG RESISTOR		
	R 203	NRSA63J-0R0X	MG RESISTOR		
	R 204	NRSA63J-273X	MG RESISTOR		
	R 205	NRSA63J-273X	MG RESISTOR		
	R 206	NRSA63J-303X	MG RESISTOR		
	R 207	NRSA63J-473X	MG RESISTOR		
	R 208	NRSA63J-223X	MG RESISTOR		
	R 209	NRSA63J-223X	MG RESISTOR		
	R 210	NRSA63J-242X	MG RESISTOR		
	R 211	NRSA63J-242X	MG RESISTOR		
	R 212	NRSA63J-103X	MG RESISTOR		
	R 213	NRSA63J-822X	MG RESISTOR		
	R 214	NRSA63J-103X	MG RESISTOR		
	R 215	NRSA63J-103X	MG RESISTOR		
	R 216	NRSA63J-912X	MG RESISTOR		
	R 219	NRSA63J-183X	MG RESISTOR		
	R 220	NRSA63J-243X	MG RESISTOR		
	R 221	NRSA63J-682X	MG RESISTOR		
	R 222	NRSA63J-103X	MG RESISTOR		

■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 223	NRSA63J-912X	MG RESISTOR		
	R 224	NRSA63J-103X	MG RESISTOR		
	R 251	NRS125J-R47X	MG RESISTOR		
	R 252	NRSA63J-2R2X	MG RESISTOR		
	R 253	NRSA63J-0R0X	MG RESISTOR		
	R 254	NRSA63J-203X	MG RESISTOR		
	R 255	NRSA63J-103X	MG RESISTOR		
	R 256	NRSA63J-470X	MG RESISTOR		
	R 258	NRSA63J-0R0X	MG RESISTOR		
	R 259	NRSA63J-103X	MG RESISTOR		
	R 301	NRSA63J-473X	MG RESISTOR		
	R 302	NRSA63J-473X	MG RESISTOR		
	R 303	NRSA63J-473X	MG RESISTOR		
	R 304	NRSA63J-473X	MG RESISTOR		
	R 305	NRSA63J-473X	MG RESISTOR		
	R 306	NRSA63J-473X	MG RESISTOR		
	R 307	NRSA63J-473X	MG RESISTOR		
	R 308	NRSA63J-0R0X	MG RESISTOR		
	R 309	NRSA63J-473X	MG RESISTOR		
	R 313	NRSA63J-473X	MG RESISTOR		
	R 317	NRSA63J-473X	MG RESISTOR		
	R 319	NRSA63J-473X	MG RESISTOR		
	R 320	NRSA63J-105X	MG RESISTOR		
	R 321	NRSA63J-473X	MG RESISTOR		
	R 323	NRSA63J-473X	MG RESISTOR		
	R 324	NRSA63J-473X	MG RESISTOR		
	R 325	NRSA63J-123X	MG RESISTOR		
	R 326	NRSA63J-473X	MG RESISTOR		
	R 327	NRSA63J-105X	MG RESISTOR		
	R 328	NRSA63J-153X	MG RESISTOR		
	R 329	NRSA63J-473X	MG RESISTOR		
	R 332	NRSA63J-102X	MG RESISTOR		
	R 333	NRSA63J-183X	MG RESISTOR		
	R 334	NRSA63J-102X	MG RESISTOR		
	R 336	NRSA63J-273X	MG RESISTOR		
	R 337	NRSA63J-273X	MG RESISTOR		
	R 338	NRSA63J-472X	MG RESISTOR		
	R 339	NRSA63J-472X	MG RESISTOR		
	R 340	NRSA63J-103X	MG RESISTOR		
	R 341	NRSA63J-562X	MG RESISTOR		
	R 402	NRSA63J-472X	MG RESISTOR		
	R 403	NRSA63J-0R0X	MG RESISTOR		
	R 404	NRSA63J-0R0X	MG RESISTOR		
	R 405	NRSA63J-0R0X	MG RESISTOR		
	R 411	NRSA63J-472X	MG RESISTOR		
	R 413	NRSA63J-472X	MG RESISTOR		
	R 414	NRSA63J-472X	MG RESISTOR		
	R 421	NRSA63J-0R0X	MG RESISTOR		
	R 422	NRSA63J-472X	MG RESISTOR		
	R 423	NRSA63J-472X	MG RESISTOR		
	R 424	NRSA63J-472X	MG RESISTOR		
	R 427	NRSA63J-0R0X	MG RESISTOR		
	R 428	NRSA63J-472X	MG RESISTOR		
	R 430	NRSA63J-472X	MG RESISTOR		
	R 431	NRSA63J-472X	MG RESISTOR		
	R 451	NRSA63J-331X	MG RESISTOR		
	R 452	NRS125J-R47X	MG RESISTOR		
	R 453	NRSA63J-121X	MG RESISTOR		
	R 454	NRS125J-R47X	MG RESISTOR		
	R 455	NRSA63J-751X	MG.RES C.M		
	R 456	NRSA63J-103X	MG RESISTOR		
	R 457	NRSA63J-183X	MG RESISTOR		
	R 501	NRSA63J-470X	MG RESISTOR		
	R 512	NRSA63J-332X	MG RESISTOR		
	R 521	NRSA63J-103X	MG RESISTOR		
	R 537	NRSA63J-0R0X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R 541	NRSA63J-0R0X	MG RESISTOR		
	R 543	NRSA63J-0R0X	MG RESISTOR		
	R 544	NRSA63J-471X	MG RESISTOR		
	R 547	NRSA63J-0R0X	MG RESISTOR		
	R 548	NRSA63J-471X	MG RESISTOR		
	R 549	NRSA63J-471X	MG RESISTOR		
	R 550	NRSA63J-471X	MG RESISTOR		
	R 551	NRSA63J-0R0X	MG RESISTOR		
	R 552	NRSA63J-0R0X	MG RESISTOR		
	R 553	NRSA63J-0R0X	MG RESISTOR		
	R 565	NRVA63D-103X	MF RESISTER		
	R 566	NRVA63D-122X	MG RESISTOR		
	R 567	NRVA63D-151X	MG RESISTOR		
	R 568	NRVA63D-151X	MG RESISTOR		
	R 569	NRVA63D-151X	MG RESISTOR		
	R 570	NRSA63J-100X	MG RESISTOR		
	R 572	NRVA63D-151X	MG RESISTOR		
	R 573	NRSA63J-162X	MG RESISTOR		
	R 574	NRSA63J-162X	MG RESISTOR		
	R 575	NRSA63J-471X	MG RESISTOR		
	R 576	NRSA63J-471X	MG RESISTOR		
	R 578	NRSA63J-471X	MG RESISTOR		
	R 579	NRSA63J-471X	MG RESISTOR		
	R 580	NRSA63J-471X	MG RESISTOR		
	R 583	NRSA63J-471X	MG RESISTOR		
	R 584	NRSA63J-332X	MG RESISTOR		
	R 608	NRSA63J-103X	MG RESISTOR		
	R 611	NRVA63D-101X	RES. C.M		
	R 612	NRSA63J-750X	MG RESISTOR		
	R 613	NRVA63D-151X	MG RESISTOR		
	R 614	NRSA63J-750X	MG RESISTOR		
	R 615	NRVA63D-101X	RES. C.M		
	R 616	NRSA63J-750X	MG RESISTOR		
	R 617	NRVA63D-101X	RES. C.M		
	R 618	NRSA63J-750X	MG RESISTOR		
	R 621	NRSA63J-0R0X	MG RESISTOR		
	R 622	NRSA63J-0R0X	MG RESISTOR		
	R 655	NRSA63J-0R0X	MG RESISTOR		
	R 738	NRSA63J-152X	MG RESISTOR		
	R 739	NRSA63J-0R0X	MG RESISTOR		
	R 740	NRSA63J-0R0X	MG RESISTOR		
	R 831	NRSA63J-222X	MG RESISTOR		
	R 832	NRSA63J-222X	MG RESISTOR		
	R 833	NRSA63J-222X	MG RESISTOR		
	R 834	NRSA63J-222X	MG RESISTOR		
	R 835	NRSA63J-0R0X	MG RESISTOR		
	R 836	NRSA63J-152X	MG RESISTOR		
	R 837	NRSA63J-222X	MG RESISTOR		
	R 840	NRSA63J-103X	MG RESISTOR		
	R 843	NRSA63J-103X	MG RESISTOR		
	R 844	NRSA63J-103X	MG RESISTOR		
	R 851	NRSA63J-561X	MG RESISTOR		
	R 852	NRSA63J-472X	MG RESISTOR		
	R 854	NRSA63J-103X	MG RESISTOR		
	R 855	NRSA63J-0R0X	MG RESISTOR		
	R 856	NRSA63J-103X	MG RESISTOR		
	R 857	NRSA63J-103X	MG RESISTOR		
	R 858	NRSA63J-103X	MG RESISTOR		
	R 870	NRSA63J-103X	MG RESISTOR	FOR Q811(LED)	
	R 871	NRSA63J-103X	MG RESISTOR	FOR Q812(LED)	
	R 872	NRSA63J-103X	MG RESISTOR	FOR Q813(LED)	
	R 873	NRSA63J-103X	MG RESISTOR	FOR Q814(LED)	
	R 874	NRSA63J-103X	MG RESISTOR	FOR Q815(LED)	
	R 875	NRSA63J-103X	MG RESISTOR	FOR Q816(LED)	
	R 876	NRSA63J-103X	MG RESISTOR	FOR Q817(LED)	
	R 877	NRSA63J-103X	MG RESISTOR	FOR Q818(LED)	

■ **Electrical parts list (Servo control board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 878	NRSA63J-103X	MG RESISTOR	FOR Q819(LED)	
	R 879	NRSA63J-103X	MG RESISTOR	FOR Q820(LED)	
	R 880	NRSA63J-103X	MG RESISTOR	FOR Q821(LED)	
	R 881	NRSA63J-103X	MG RESISTOR	FOR Q822(LED)	
	R 882	NRSA63J-103X	MG RESISTOR	FOR Q823(LED)	
	R 890	NRSA63J-222X	MG RESISTOR		
	R 893	NRSA63J-103X	MG RESISTOR		
	R 894	NRSA63J-103X	MG RESISTOR		
	R 895	NRSA63J-101X	MG RESISTOR		
	R 896	NRSA63J-103X	MG RESISTOR		
	R 897	NRSA63J-222X	MG RESISTOR		
	R 898	NRSA63J-104X	MG RESISTOR		
	R 991	NRSA63J-220X	MG RESISTOR		
	R9801	NRSA63J-123X	MG RESISTOR		
	R9802	NRSA63J-223X	MG RESISTOR		
	R9803	NRSA63J-122X	MG RESISTOR		
	R9804	NRSA63J-821X	MG RESISTOR		
	R9805	NRSA63J-242X	MG RESISTOR		
	R9806	NRSA63J-821X	MG RESISTOR		
	R9807	NRSA63J-222X	MG RESISTOR		
	R9808	NRSA63J-102X	MG RESISTOR		
	R9809	NRSA63J-223X	MG RESISTOR		
	R9810	NRSA63J-222X	MG RESISTOR		
	R9811	NRSA63J-103X	MG RESISTOR		
	R9812	NRSA63J-103X	MG RESISTOR		
	R9813	NRSA63J-103X	MG RESISTOR		
	R9814	NRSA63J-103X	MG RESISTOR		
	R9815	NRSA63J-821X	MG RESISTOR		
	R9816	NRSA63J-820X	MG RESISTOR		
	R9817	NRSA63J-102X	MG RESISTOR		
	R9818	NRSA63J-102X	MG RESISTOR		
	R9901	NRSA63J-0R0X	MG RESISTOR		
	W 2	QUB220-07HPDM	SIN TWIST WIRE		
	X 301	NAX0542-001X	C RESONATOR		
	X 401	NAX0543-001X	C RESONATOR		
	X 571	NAX0513-001X	CRYSTAL		
	X 801	NAX0482-001X	RESONATOR I.M		

■ **Electrical parts list (Main board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	BK761	E409182-001SM	GRAND TERMINAL		
	BK771	E409182-001SM	GRAND TERMINAL		
⚠	C 902	QFZ9075-683	M CAPACITOR	.068MF	
⚠	C 903	QFZ9075-683	M CAPACITOR	.068MF	
⚠	C 905	QCZ9079-102	C CAPACITOR	1000PF	
⚠	C 906	QCZ9079-102	C CAPACITOR	1000PF	
⚠	C 907	QETM2DM-157	E CAPACITOR	J/C/DOM	
	C 908	QCZ0136-332Z	C CAPACITOR	3300PF	
	C 909	QCZ0136-101Z	C CAPACITOR	100PF	
	C 910	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 913	QCZ0136-101Z	C CAPACITOR	100PF	
	C 914	QEZ0532-396Z	E CAPACITOR	39MF	
	C 915	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
	C 917	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C 918	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C 919	QCZ0136-101Z	C CAPACITOR	100PF	
	C 951	QCZ0136-101Z	C CAPACITOR	100PF	
	C 960	QEZ0529-826Z	E CAPACITOR	82MF	
	C 961	QFVC1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 962	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 963	QEZ0533-396Z	E CAPACITOR	39MF	
	C 964	QFVC1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 965	QEZ0528-108	E CAPACITOR	1000MF	
	C 966	QETN1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 967	QFVC1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 968	QFVC1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 969	QETN1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 970	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 971	QEZ0528-108	E CAPACITOR	1000MF	
	C 972	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V	
	C 973	QFVC1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 978	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 979	QEZ0530-827	E CAPACITOR	820MF	
	C 981	QFVC1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 982	QEMW1EM-108	E CAPACITOR	1000MF 20% 25V	
	C 984	QETN1EM-477Z	E CAPACITOR	470MF 20% 25V	
	C 987	QETN1EM-477Z	E CAPACITOR	470MF 20% 25V	
	C 989	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 992	QETN1HM-474Z	E CAPACITOR	.47MF 20% 50V	
	C 993	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 994	QDVB1EZ-223Y	C CAPACITOR		
	C 995	QETN1CM-227Z	E CAPACITOR	220MF 20% 16V	
	C 996	QETN1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 997	QETN1CM-227Z	E CAPACITOR	220MF 20% 16V	
	C1101	QFLC1HJ-182Z	M CAPACITOR	1800PF 5% 50V	
	C1102	QFLC1HJ-182Z	M CAPACITOR	1800PF 5% 50V	
	C1103	QTE1E48-476Z	E CAPACITOR		
	C1104	QTE1E48-476Z	E CAPACITOR		
	C1105	QTE1C28-107Z	E CAPACITOR		
	C1106	QTE1C28-107Z	E CAPACITOR		
	C1107	QTE1C28-107Z	E CAPACITOR		
	C1108	QTE1C28-107Z	E CAPACITOR		
	C1109	QFP31HG-103Z	PP CAPACITOR	.010MF 50V	
	C1110	QFP31HG-103Z	PP CAPACITOR	.010MF 50V	
	C1111	QFN31HJ-561Z	M CAPACITOR	560PF 5% 50V	
	C1112	QFN31HJ-561Z	M CAPACITOR	560PF 5% 50V	
	C1113	QFN31HJ-182Z	M CAPACITOR	1800PF 5% 50V	
	C1114	QFN31HJ-182Z	M CAPACITOR	1800PF 5% 50V	
	C1115	QFP31HJ-121Z	PP CAPACITOR	120PF 5% 50V	
	C1116	QFP31HJ-121Z	PP CAPACITOR	120PF 5% 50V	
	C1117	QFLC1HJ-561Z	M CAPACITOR	560PF 5% 50V	
	C1118	QFLC1HJ-561Z	M CAPACITOR	560PF 5% 50V	
	C1119	QTE0J28-108Z	E CAPACITOR		
	C1120	QTE0J28-108Z	E CAPACITOR		
	C1121	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1122	QCZ0202-155Z	ML C CAPA I/M	1.5MF	

⚠	Item	Parts number	Parts name	Remarks	Area
	C1123	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1124	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1125	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C1126	QFVJ1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C1127	QTE1A28-477Z	E CAPACITOR		
	C1128	QFLC1HJ-152Z	M CAPACITOR	1500PF 5% 50V	
	C1131	QFLC1HJ-272Z	M CAPACITOR	2700PF 5% 50V	
	C1132	QFLC1HJ-272Z	M CAPACITOR	2700PF 5% 50V	
	C1133	QFLC1HJ-152Z	M CAPACITOR	1500PF 5% 50V	
	C1151	QTE1C28-476Z	E CAPACITOR		
	C1152	QFVJ1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1153	QFVJ1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C1161	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1162	QTE1E28-476Z	E CAPACITOR		
	C1163	QCBB1HK-151Y	C CAPACITOR	150PF 10% 50V	
	C1164	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C1165	QCBB1HK-121Y	C CAPACITOR	120PF 10% 50V	
	C1166	QTE1A28-107Z	E CAPACITOR		
	C1167	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C1181	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C1191	QCBB1HK-121Y	C CAPACITOR	120PF 10% 50V	
	C1193	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	CN751	QGF1205C1-18	FFC/FPC CONNECTOR		
	CN752	QGF1205C1-18	FFC/FPC CONNECTOR		
	CN754	QGB2510J1-04	CONNECTOR		
	CN841	QGF1031C1-09S	FFC/FPC CONNECTOR		
	CN842	QGA2001F1-09	CONNECTOR		
	CN951	QGF1016C1-11	CONNECTOR		
	CN952	QGA2001F1-08	CONNECTOR		
	CN953	QGA2001F1-13	CONNECTOR		
⚠	CP951	ICP-N10-T	ICP I/M		
⚠	D 901	S1WB/A/60-4101	BRIDGE DIODE		
⚠	D 902	ERA18-04-T1	FR DIODE		
⚠	D 903	ERA18-04-T1	FR DIODE		
⚠	D 904	ERA18-04-T1	FR DIODE		
⚠	D 908	ERA18-04-T1	FR DIODE		
⚠	D 910	ERA18-04-T1	FR DIODE		
	D 911	1SS133-T2	SI DIODE IM		
⚠	D 950	ERA18-04-T1	FR DIODE		
⚠	D 951	ERA18-04-T1	FR DIODE		
⚠	D 952	ERA18-04-T1	FR DIODE		
⚠	D 953	FMB-24	FUSEIODE		
⚠	D 954	ERA18-04-T1	FR DIODE		
⚠	D 956	ERA18-04-T1	FR DIODE		
⚠	D 957	ERA18-04-T1	FR DIODE		
⚠	D 958	FMB-24	FUSEIODE		
	D 960	MTZJ4.7B-T2	Z DIODE I M		
	D 972	1SS133-T2	SI DIODE IM		
	D 973	1SS133-T2	SI DIODE IM		
	D 974	1SS133-T2	SI DIODE IM		
	D 991	MTZJ5.1C-T2	ZENER DIODE		
	D1161	RD3.3ES/B2/-T2	ZENER DIODE IM		
	FC901	QNG0003-001Z	FUSE CLIP		
	FC902	QNG0003-001Z	FUSE CLIP		
	HS901	E70306-002	HEAT SINK		
	HS952	E70306-002	HEAT SINK		
	IC751	NJM5532L	IC		
	IC752	NJM5532L	IC		
	IC753	MN35505-X	IC C M		
	IC754	TC74HC08AP	IC		
	IC755	NJM78L05A-T	IC I.M		
⚠	IC901	STR-G6651	IC		
	IC951	PQ05RD21	IC		
	IC952	SI-3033C	IC		
	J 751	QNN0469-001	OPT TRANSMITTER		
	J 752	QNN0458-001	PIN JACK	COAX D.OUT	

■ **Electrical parts list (Main board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	J 753	QNZ0487-001	OPT TRANSMITTER	OPT D.OUT	
	J 754	QNN0454-001	PIN JACK		
	J 755	QNN0471-001	PIN JACK		
	J 756	QNS0089-001	3.5 JACK	COMPULINK	
	J 901	QNC0082-001	AC INLET	J/C	
	K 902	QQR1183-001Z	FERRITE BEADS		
	K1101	QQR1183-001Z	FERRITE BEADS		
	K1102	QQR1183-001Z	FERRITE BEADS		
	K1103	QQR1183-001Z	FERRITE BEADS		
	K1104	QQR1183-001Z	FERRITE BEADS		
	K1110	QQR1183-001Z	FERRITE BEADS		
	K1161	QQR1183-001Z	FERRITE BEADS		
	K1162	QQR1183-001Z	FERRITE BEADS		
	K1163	QQR1183-001Z	FERRITE BEADS		
⚠	L 901	QQR1105-001	LINE FILTER		
	L 951	QQL31AK-101Z	INDUCTOR		
	L 952	QQL26AK-220Z	INDUCTOR		
	L 955	QQL26AK-220Z	INDUCTOR		
	L 957	QQL244K-100Z	INDUCTOR		
	L 959	QQL244K-100Z	INDUCTOR		
	L1101	QQL121M-1R0Y	INDUCTOR		
⚠	PC901	PC123FY	IC(PHOTO COUPLE		
⚠	PC902	PC123FY	IC(PHOTO COUPLE		
	Q 951	KTD863/Y/-T	TRANSISTOR		
	Q 952	KRA104M-T	D.TR.I.M		
	Q 953	KTA1267/G/-T	TR I/M		
	Q 991	KTC3199/Y/-T	TR I/M		
	Q1101	2SC3576-JVC-T	TRANSISTOR I/M		
	Q1102	2SC3576-JVC-T	TRANSISTOR I/M		
	Q1103	2SC3576-JVC-T	TRANSISTOR I/M		
	Q1104	2SC3576-JVC-T	TRANSISTOR I/M		
	R 900	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
⚠	R 901	QRL01DJ-683X	OMF RESISTOR	68K 5% 1/1W	
	R 902	QRZ9037-335	F RESISTOR	3.3M 1/0W	
⚠	R 903	QRE141J-390Y	C RESISTOR	39 5% 1/4W	
	R 904	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 905	QRL027J-683	OMF RESISTOR	68K 5% 1/2W	
	R 906	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
⚠	R 907	QRT022J-R47	OMF RESISTOR	5% 1/2W	
	R 908	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 910	QRE141J-754Y	C RESISTOR	750K 5% 1/4W	
	R 911	QRE141J-754Y	C RESISTOR	750K 5% 1/4W	
	R 952	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 953	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 955	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 956	QRE141J-120Y	C RESISTOR	12 5% 1/4W	
	R 960	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 961	QRE141J-681Y	C RESISTOR	680 5% 1/4W	
	R 963	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 965	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 969	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 973	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 974	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 975	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 976	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1101	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R1102	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R1103	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1104	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1105	QRE141J-561Y	C RESISTOR	560 5% 1/4W	
	R1106	QRE141J-561Y	C RESISTOR	560 5% 1/4W	
	R1107	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1108	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1109	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R1110	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R1111	QRE141J-821Y	C RESISTOR	820 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R1112	QRE141J-821Y	C RESISTOR	820 5% 1/4W	
	R1113	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1114	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1115	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1116	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R1117	QRA14CF-6200Y	MF RESISTOR	62 1/4W	
	R1118	QRA14CF-6200Y	MF RESISTOR	62 1/4W	
	R1119	QRA14CF-6800Y	MF RESISTOR	68 1/4W	
	R1120	QRA14CF-6800Y	MF RESISTOR	68 1/4W	
	R1121	QRA14CF-3601Y	MF RESISTOR	36 1/4W	
	R1122	QRA14CF-3601Y	MF RESISTOR	36 1/4W	
	R1123	QRA14CF-3601Y	MF RESISTOR	36 1/4W	
	R1124	QRA14CF-3601Y	MF RESISTOR	36 1/4W	
	R1125	QRA14CF-3601Y	MF RESISTOR	36 1/4W	
	R1126	QRA14CF-3601Y	MF RESISTOR	36 1/4W	
	R1127	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1128	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1129	QRA14CF-3301Y	MF RESISTOR	33 1/4W	
	R1130	QRA14CF-3301Y	MF RESISTOR	33 1/4W	
	R1131	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1132	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1133	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1134	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1135	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1136	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1137	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1138	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R1139	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R1140	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R1141	QRE141J-680Y	C RESISTOR	68 5% 1/4W	
	R1142	QRE141J-680Y	C RESISTOR	68 5% 1/4W	
	R1144	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1145	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1146	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1147	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1148	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1149	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1150	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R1151	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R1152	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R1153	QRE141J-105Y	C RESISTOR	1.0M 5% 1/4W	
	R1154	QRE141J-105Y	C RESISTOR	1.0M 5% 1/4W	
	R1155	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1156	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1161	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R1162	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1163	QRE141J-270Y	C RESISTOR	27 5% 1/4W	
	R1164	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R1165	QRJ146J-2R2X	UNF C RESISTOR	2.2 5% 1/4W	
	R1181	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1182	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1183	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1184	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1185	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1186	QRE141J-750Y	C RESISTOR	75 5% 1/4W	
	R1187	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R1188	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	SP753	VYH7653-001	IC HOLDER		
⚠	T 901	QQS0114-001	SW TRANSF		
	T1161	QQR1185-001	PULSE TRANS		

■ **Electrical parts list (Operation switch & FL Display board)**

Block No. 03

⚠	Item	Parts number	Parts name	Remarks	Area
	C 806	QER61AM-476Z	E CAPACITOR	47MF 20% 10V	
	C 807	NCB31CK-104X	C CAPACITOR		
	C 810	QER61HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	CN802	QGF1016F3-13	CONNECTOR		
	CN804	QGF0522F1-40W	FFC CONNECTOR		
	CN805	QGF1016C2-07W	FFC/FPC CONNECTOR		
	CN806	QGF1016F3-07	CONNECTOR		
	CN812	QGF1016F2-04W	CONNECTOR		
	CN813	QGF1016F2-04W	CONNECTOR		
	CN814	QGF1016F3-11	CONNECTOR		
	D 805	SLR-342DC-T	LED I.M		
	D 806	SLR-342DC-T	LED I.M		
	D 807	SLR-342DC-T	LED I.M		
	D 808	SLR-342DC-T	LED I.M		
	D 809	SLR-342DC-T	LED I.M		
	D 810	SLR-342DC-T	LED I.M		
	D 811	SLR-342DC-T	LED I.M		
	D 812	SPR-325MVW/L/-T	LED		
	D 813	SELU2E10C	LED		
	D 814	SPR-325MVW/L/-T	LED		
	D 815	SLR-342MC-T	LED		
	D 816	SLR-342DC-T	LED I.M		
	D 817	SLR-342DC-T	LED I.M		
	D 818	SLR-342DC-T	LED I.M		
	D 819	SLR-342DC-T	LED I.M		
	D 820	SLR-342DC-T	LED I.M		
	D 821	SLR-342DC-T	LED I.M		
	D 822	SLR-342DC-T	LED I.M		
	D 823	SLR-342MC-T	LED		
	DI801	QLF0085-002	FL TUBE	FUTABA	
	IC804	PIC-37043TH2	PHOTO DET.		
	R 805	NRSA63J-222X	MG RESISTOR		
	R 806	NRSA63J-431X	MG RESISTOR		
	R 807	NRSA63J-431X	MG RESISTOR		
	R 808	NRSA63J-561X	MG RESISTOR		
	R 809	NRSA63J-751X	MG.RES C.M		
	R 810	NRSA63J-132X	MG RESISTOR		
	R 811	NRSA63J-222X	MG RESISTOR		
	R 812	NRSA63J-512X	MG RESISTOR		
	R 813	NRSA63J-222X	MG RESISTOR		
	R 814	NRSA63J-431X	MG RESISTOR		
	R 815	NRSA63J-431X	MG RESISTOR		
	R 816	NRSA63J-561X	MG RESISTOR		
	R 817	NRSA63J-751X	MG.RES C.M		
	R 818	NRSA63J-132X	MG RESISTOR		
	R 819	NRSA63J-222X	MG RESISTOR		
	R 821	NRSA63J-151X	MG RESISTOR		
	R 822	NRSA63J-181X	MG RESISTOR		
	R 823	NRSA63J-121X	MG RESISTOR		
	R 824	NRSA63J-181X	MG RESISTOR		
	R 825	NRSA63J-181X	MG RESISTOR		
	R 826	NRSA63J-181X	MG RESISTOR		
	R 827	NRSA63J-181X	MG RESISTOR		
	R 828	NRSA63J-181X	MG RESISTOR		
	R 829	NRSA63J-181X	MG RESISTOR		
	R 830	NRSA63J-181X	MG RESISTOR		
	R 838	NRSA63J-101X	MG RESISTOR		
	R 839	NRSA63J-181X	MG RESISTOR		
	R 845	NRSA63J-181X	MG RESISTOR		
	R 860	NRSA63J-181X	MG RESISTOR		
	R 861	NRSA63J-181X	MG RESISTOR		
	R 862	NRSA63J-181X	MG RESISTOR		
	R 863	NRSA63J-181X	MG RESISTOR		
	R 864	NRSA63J-181X	MG RESISTOR		
	R 865	NRSA63J-181X	MG RESISTOR		
	R 866	NRSA63J-181X	MG RESISTOR		
	R 867	NRSA63J-181X	MG RESISTOR		
	S 801	QSW0651-001Z	TACT SWITCH		
	S 802	QSW0651-001Z	TACT SWITCH		
	S 803	QSW0651-001Z	TACT SWITCH		
	S 804	QSW0651-001Z	TACT SWITCH		
	S 805	QSW0651-001Z	TACT SWITCH		
	S 806	QSW0651-001Z	TACT SWITCH		
	S 807	QSW0651-001Z	TACT SWITCH		
	S 808	QSW0651-001Z	TACT SWITCH		
	S 809	QSW0651-001Z	TACT SWITCH		
	S 810	QSW0651-001Z	TACT SWITCH		
	S 811	QSW0651-001Z	TACT SWITCH		
	S 812	QSW0651-001Z	TACT SWITCH		
	S 813	QSW0651-001Z	TACT SWITCH		
	S 814	QSW0651-001Z	TACT SWITCH		
	S 815	QSW0651-001Z	TACT SWITCH		
	S 816	QSW0651-001Z	TACT SWITCH		

■ **Electrical parts list (Motor & detection switch board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 81	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C 82	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C 83	QDVB1EZ-223Y	C CAPACITOR		
	CN 81	QGF1016F3-09	CONNECTOR		
	CN 82	QGF1016F3-04	CONNECTOR		
	CN 84	QJB002-064601	SIN CR C-B WIRE		
	CN 85	QJB002-031703	SIN CR C-B WIRE		
	IC 81	GP2S28J	PHOTO SENSOR		
	IC 82	GP2S28	PHOTO SENSOR		
	Q 81	2SC1740S/RS/-T	TRANSISTOR		
	Q 82	2SC1740S/RS/-T	TRANSISTOR		
	R 81	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 82	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 83	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 84	QRE141J-822Y	C RESISTOR	8.2K 5% 1/4W	
	R 85	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 86	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	S 81	QSW0472-001	SWITCH		
	S 82	QSW0472-001	SWITCH		
	S 83	QSW0472-001	SWITCH		

■ **Electrical parts list (Cam switch board)** **Block No. 05**

⚠	Item	Parts number	Parts name	Remarks	Area
	CN083	QGF1016F3-04	CONNECTOR		
	S 084	QSW0932-001	CAM SWITCH		

■ **Electrical parts list (Rest switch board)** **Block No. 06**

⚠	Item	Parts number	Parts name	Remarks	Area
	CN 1	QGF1006F1-30W	SOCKET		
	CN 2	QGF1016F2-11W	CONNECTOR		
	CN 3	QGF0522F1-45W	FFC/FPC CONNECTOR		
	R 1	NRSA63J-391X	MG.RESISTOR		
	R 2	NRSA63J-910X	MG.RESISTOR		
	SW 1	QSW0620-001	SWITCH		
	SW 2	NSW0127-001X	SLIDE SWITCH		

■ **Electrical parts list (Audio board)** **Block No. 07**

⚠	Item	Parts number	Parts name	Remarks	Area
	BK781	E409182-001SM	GRAND TERMINAL		
	C1201	QFLC1HJ-222Z	M CAPACITOR	2200PF 5% 50V	
	C1202	QFLC1HJ-222Z	M CAPACITOR	2200PF 5% 50V	
	C1203	QTE1E28-476Z	E CAPACITOR		
	C1204	QTE1E28-476Z	E CAPACITOR		
	C1205	QTE1C28-227Z	E CAPACITOR		
	C1206	QTE1C28-227Z	E CAPACITOR		
	C1207	QTE1C28-227Z	E CAPACITOR		
	C1208	QTE1C28-227Z	E CAPACITOR		
	C1209	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V	
	C1210	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V	
	C1211	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V	
	C1212	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V	
	C1213	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V	
	C1214	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V	
	C1215	QFLC1HJ-121Z	M CAPACITOR	120PF 5% 50V	
	C1216	QFLC1HJ-121Z	M CAPACITOR	120PF 5% 50V	
	C1217	QFLC1HJ-122Z	M CAPACITOR	1200PF 5% 50V	
	C1218	QFLC1HJ-122Z	M CAPACITOR	1200PF 5% 50V	
	C1219	QTE1A28-477Z	E CAPACITOR		
	C1220	QTE1A28-477Z	E CAPACITOR		
	C1221	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1222	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1223	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1224	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1225	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C1226	QFVJ1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C1227	QTE1A28-477Z	E CAPACITOR		
	C1228	NCB31HK-152X	C CAPACITOR		
	C1235	NCS31HJ-102X	C CAPACITOR		
	C1236	NCS31HJ-102X	C CAPACITOR		
	C1237	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1238	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1301	QFLC1HJ-222Z	M CAPACITOR	2200PF 5% 50V	
	C1302	QFLC1HJ-222Z	M CAPACITOR	2200PF 5% 50V	
	C1303	QTE1E28-476Z	E CAPACITOR		
	C1304	QTE1E28-476Z	E CAPACITOR		
	C1305	QTE1C28-227Z	E CAPACITOR		
	C1306	QTE1C28-227Z	E CAPACITOR		
	C1307	QTE1C28-227Z	E CAPACITOR		
	C1308	QTE1C28-227Z	E CAPACITOR		
	C1309	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V	
	C1310	QFLC1HJ-123Z	M CAPACITOR	.012MF 5% 50V	
	C1311	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V	
	C1312	QFLC1HJ-102Z	M CAPACITOR	1000PF 5% 50V	
	C1313	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V	
	C1314	QFLC1HJ-472Z	M CAPACITOR	4700PF 5% 50V	
	C1315	QFLC1HJ-121Z	M CAPACITOR	120PF 5% 50V	
	C1316	QFLC1HJ-121Z	M CAPACITOR	120PF 5% 50V	
	C1317	QFLC1HJ-122Z	M CAPACITOR	1200PF 5% 50V	
	C1318	QFLC1HJ-122Z	M CAPACITOR	1200PF 5% 50V	
	C1319	QTE1A28-477Z	E CAPACITOR		
	C1320	QTE1A28-477Z	E CAPACITOR		
	C1321	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1322	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1323	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1324	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1325	QFLC1HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C1326	QFVJ1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C1327	QTE1A28-477Z	E CAPACITOR		
	C1328	NCB31HK-152X	C CAPACITOR		
	C1335	NCS31HJ-102X	C CAPACITOR		
	C1336	NCS31HJ-102X	C CAPACITOR		
	C1337	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C1338	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	CN761	QGB2510K1-16	CONNECTOR		

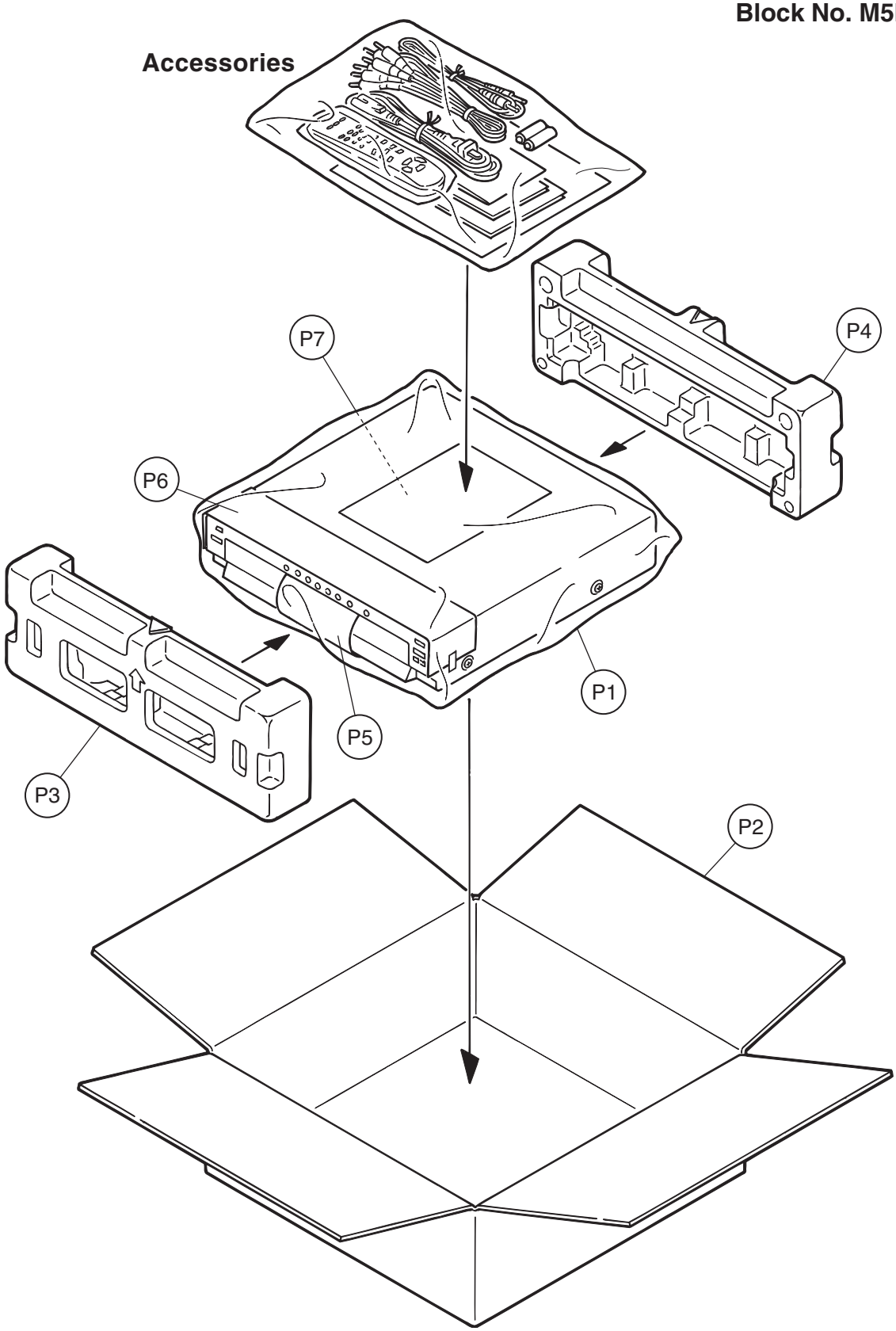
⚠	Item	Parts number	Parts name	Remarks	Area
	CN762	QGB2510K2-07	CONNECTOR		
	CN763	QGB2510J1-07	CONNECTOR		
	CN764	QGB2510K1-04	CONNECTOR		
	IC761	NJM4580L	IC		
	IC762	NJM4580L	IC		
	IC763	MN35505-X	IC C M		
	IC771	NJM4580L	IC		
	IC772	NJM4580L	IC		
	IC773	MN35505-X	IC C M		
	J 761	QNN0465-001	PIN JACK		
	K1201	NQR0227-004X	FERRITE BEADS		
	K1202	NQR0227-004X	FERRITE BEADS		
	K1203	NQR0227-004X	FERRITE BEADS		
	K1204	NQR0227-004X	FERRITE BEADS		
	K1205	NQR0227-004X	FERRITE BEADS		
	K1206	NQR0227-004X	FERRITE BEADS		
	K1207	NQR0227-004X	FERRITE BEADS		
	K1301	NQR0227-004X	FERRITE BEADS		
	K1302	NQR0227-004X	FERRITE BEADS		
	K1303	NQR0227-004X	FERRITE BEADS		
	K1304	NQR0227-004X	FERRITE BEADS		
	Q1201	2SD1302/ST/-T	TRANSISTOR		
	Q1202	2SD1302/ST/-T	TRANSISTOR		
	Q1301	2SD1302/ST/-T	TRANSISTOR		
	Q1302	2SD1302/ST/-T	TRANSISTOR		
	R1201	NRSA63J-101X	MG RESISTOR		
	R1202	NRSA63J-101X	MG RESISTOR		
	R1203	NRSA63J-103X	MG RESISTOR		
	R1204	NRSA63J-103X	MG RESISTOR		
	R1205	NRSA63J-561X	MG RESISTOR		
	R1206	NRSA63J-561X	MG RESISTOR		
	R1207	NRSA63J-273X	MG RESISTOR		
	R1208	NRSA63J-273X	MG RESISTOR		
	R1209	NRSA63J-183X	MG RESISTOR		
	R1210	NRSA63J-183X	MG RESISTOR		
	R1211	NRSA63J-102X	MG RESISTOR		
	R1212	NRSA63J-102X	MG RESISTOR		
	R1213	NRSA63J-221X	MG RESISTOR		
	R1214	NRSA63J-221X	MG RESISTOR		
	R1215	NRSA63J-221X	MG RESISTOR		
	R1216	NRSA63J-221X	MG RESISTOR		
	R1217	QRA14CF-7500Y	MF RESISTOR	75 1/4W	
	R1218	QRA14CF-7500Y	MF RESISTOR	75 1/4W	
	R1219	QRA14CF-7500Y	MF RESISTOR	75 1/4W	
	R1220	QRA14CF-7500Y	MF RESISTOR	75 1/4W	
	R1221	NRSA63J-362X	MG RESISTOR		
	R1222	NRSA63J-362X	MG RESISTOR		
	R1223	NRSA63J-272X	MG RESISTOR		
	R1224	NRSA63J-272X	MG RESISTOR		
	R1225	NRSA63J-272X	MG RESISTOR		
	R1226	NRSA63J-272X	MG RESISTOR		
	R1227	QRA14CF-3602Y	MF RESISTOR	36 1/4W	
	R1228	QRA14CF-3602Y	MF RESISTOR	36 1/4W	
	R1229	QRA14CF-1601Y	MF RESISTOR	16 1/4W	
	R1230	QRA14CF-1601Y	MF RESISTOR	16 1/4W	
	R1231	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1232	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1233	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1234	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1235	NRSA63J-303X	MG RESISTOR		
	R1236	NRSA63J-303X	MG RESISTOR		
	R1237	NRSA63J-303X	MG RESISTOR		
	R1238	NRSA63J-303X	MG RESISTOR		
	R1239	NRSA63J-100X	MG RESISTOR		
	R1240	NRSA63J-100X	MG RESISTOR		
	R1241	NRSA63J-680X	MG RESISTOR		

■ **Electrical parts list (Audio board)** **Block No. 07**

⚠	Item	Parts number	Parts name	Remarks	Area
	R1242	NRSA63J-680X	MG RESISTOR		
	R1244	NRSA63J-471X	MG RESISTOR		
	R1245	NRSA63J-471X	MG RESISTOR		
	R1246	NRSA63J-471X	MG RESISTOR		
	R1247	NRSA63J-471X	MG RESISTOR		
	R1248	NRSA63J-471X	MG RESISTOR		
	R1249	NRSA63J-471X	MG RESISTOR		
	R1250	NRSA63J-332X	MG RESISTOR		
	R1251	NRSA63J-473X	MG RESISTOR		
	R1301	NRSA63J-101X	MG RESISTOR		
	R1302	NRSA63J-101X	MG RESISTOR		
	R1303	NRSA63J-103X	MG RESISTOR		
	R1304	NRSA63J-103X	MG RESISTOR		
	R1305	NRSA63J-561X	MG RESISTOR		
	R1306	NRSA63J-561X	MG RESISTOR		
	R1307	NRSA63J-273X	MG RESISTOR		
	R1308	NRSA63J-273X	MG RESISTOR		
	R1309	NRSA63J-183X	MG RESISTOR		
	R1310	NRSA63J-183X	MG RESISTOR		
	R1311	NRSA63J-102X	MG RESISTOR		
	R1312	NRSA63J-102X	MG RESISTOR		
	R1313	NRSA63J-221X	MG RESISTOR		
	R1314	NRSA63J-221X	MG RESISTOR		
	R1315	NRSA63J-221X	MG RESISTOR		
	R1316	NRSA63J-221X	MG RESISTOR		
	R1317	QRA14CF-7500Y	MF RESISTOR	75 1/4W	
	R1318	QRA14CF-7500Y	MF RESISTOR	75 1/4W	
	R1319	QRA14CF-7500Y	MF RESISTOR	75 1/4W	
	R1320	QRA14CF-7500Y	MF RESISTOR	75 1/4W	
	R1321	NRSA63J-362X	MG RESISTOR		
	R1322	NRSA63J-362X	MG RESISTOR		
	R1323	NRSA63J-272X	MG RESISTOR		
	R1324	NRSA63J-272X	MG RESISTOR		
	R1325	NRSA63J-272X	MG RESISTOR		
	R1326	NRSA63J-272X	MG RESISTOR		
	R1327	QRA14CF-3602Y	MF RESISTOR	36 1/4W	
	R1328	QRA14CF-3602Y	MF RESISTOR	36 1/4W	
	R1329	QRA14CF-1601Y	MF RESISTOR	16 1/4W	
	R1330	QRA14CF-1601Y	MF RESISTOR	16 1/4W	
	R1331	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1332	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1333	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1334	QRA14CF-1802Y	MF RESISTOR	18 1/4W	
	R1335	NRSA63J-303X	MG RESISTOR		
	R1336	NRSA63J-303X	MG RESISTOR		
	R1337	NRSA63J-303X	MG RESISTOR		
	R1338	NRSA63J-303X	MG RESISTOR		
	R1339	NRSA63J-100X	MG RESISTOR		
	R1340	NRSA63J-100X	MG RESISTOR		
	R1341	NRSA63J-680X	MG RESISTOR		
	R1342	NRSA63J-680X	MG RESISTOR		
	R1344	NRSA63J-471X	MG RESISTOR		
	R1345	NRSA63J-471X	MG RESISTOR		
	R1346	NRSA63J-471X	MG RESISTOR		
	R1347	NRSA63J-471X	MG RESISTOR		
	R1348	NRSA63J-471X	MG RESISTOR		
	R1349	NRSA63J-471X	MG RESISTOR		
	R1350	NRSA63J-332X	MG RESISTOR		
	R1351	NRSA63J-473X	MG RESISTOR		

Packing materials and accessories parts list

Block No. M4MM
Block No. M5MM



■ Parts list (Packing)

Block No. M4MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	QPC06006515P	POLY BAG	1	SET	
	P 2	LE31035-001A	PACKING CASE	1		BK
		LE31035-002A	PACKING CASE	1		SL
	P 3	LE20603-001A	PACKING PAD(F)	1	FRONT	
	P 4	LE20604-001A	PACKING PAD(R)	1	REAR	
	P 5	E36997-303	PROTECT SHEET	1	FITTING	
	P 6	E36997-173	PROTECT SHEET	1	F.PANEL	
	P 7	LV42740-001A	CAUTION SHEET	1		

■ Parts list (Accessories)

Block No. M5MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	LET0220-001B	INST BOOK	1	J	
⚠	A 2	QMPE200-183-JC	POWER CORD	1	J/C	
	A 3	BT-51028-2	J=REGIST CARD	1	J/C	
	A 4	YU20333	SAFETY INST.	1	J/C	
	A 5	QAM0375-001	COMP.CORD 3P	1	J/C	
	A 6	QAM0223-001	PLUG CORD	1	COMPULINK	
	A 7	QAM0328-001	AV CORD 3P	1		
	A 8	EWP302-011W	SIGNAL CORD	2		
	A 9	RM-SXV016J	REMOCON UNIT	1	J/C	
	A 10	----------	BATTERY	2	EXP	
	A 11	QPC02504015P	POLY BAG	1	ACC,INST	